

## Carnegie Institution for Science Bibliography FY 18-19

### Department of Embryology Year Book 18-19

Deryusheva S, Gall JG.

scaRNAs and snoRNAs: Are they limited to specific classes of substrate RNAs?  
*RNA*. 2019 Jan;25(1):17-22. doi: 10.1261/rna.068593.118.

Eble H, Joswig M, Lamberti L, Ludington WB.

Cluster partitions and fitness landscapes of the *Drosophila* fly microbiome.  
*Journal of Mathematical Biology*. 2019 May 17. doi: 10.1007/s00285-019-01381-0.

Gall JG.

Herbert Macgregor (1933-2018).

*Chromosome Research*. 2018 Dec;26(4):225-231. doi: 10.1007/s10577-018-9586-z.

Greenblatt EJ, Spradling AC.

Fragile X mental retardation 1 gene enhances the translation of large autism-related proteins.

*Science*. 2018 Aug 17;361(6403):709-712. doi: 10.1126/science.aas9963.

Gould AL, Zhang V, Lamberti L, Jones EW, Obadia B, Korasidis N, Gavryushkin A, Carlson JM, Beerenwinkel N, Ludington WB.

Microbiome interactions shape host fitness.

*Proceedings of the National Academy of Sciences of the United States of America*. 2018 Dec 18;115(51):E11951-E11960. doi: 10.1073/pnas.1809349115.

Keebaugh ES, Yamada R, Obadia B, Ludington WB, Ja WW.

Microbial Quantity Impacts *Drosophila* Nutrition, Development, and Lifespan.

*iScience*. 2018 Jun; 29;4:247-259. doi: 10.1016/j.isci.2018.06.004

Kim Y, Zheng X, Zheng Y.

Role of lamins in 3D genome organization and global gene expression.

*Nucleus*. 2019 Feb;10(1):33-41. doi: 10.1080/19491034.2019.1578601

Li BX, Chen J, Chao B, Zheng Y, Xiao X.

A Lamin-Binding Ligand Inhibits Homologous Recombination Repair of DNA Double-Strand Breaks.

*ACS Central Science*. 2018 Sep 26;4(9):1201-1210. doi: 10.1021/acscentsci.8b00379.

Liu W, Yue S, Zheng X, Hu M, Cao J, Zheng Y.

aFARP-ChIP-seq, a convenient and reliable method for genome profiling in as few as 100 cells with a capability for multiplexing ChIP-seq.

*Epigenetics*. 2019 Jun 6:1-17. doi: 10.1080/15592294.2019.1621139

Moon S, Cassani M, Lin YA, Wang L, Dou K, Zhang ZZ.

A Robust Transposon-Endogenizing Response from Germline Stem Cells.

*Developmental Cell*. 2018 Dec 3;47(5):660-671.e3. doi: 10.1016/j.devcel.2018.10.011.

Obniski R, Sieber M, Spradling AC.

Dietary Lipids Modulate Notch Signaling and Influence Adult Intestinal Development and Metabolism in *Drosophila*.

*Developmental Cell*. 2018 Oct 8;47(1):98-111.e5. doi: 10.1016/j.devcel.2018.08.013

Otis JP, Shen MC, Caldwell BA, Reyes Gaido OE, Farber SA.

Dietary cholesterol and apolipoprotein A-I are trafficked in endosomes and lysosomes in the live zebrafish intestine.

*American Journal of Physiology Gastrointestinal and Liver Physiology*. 2019 Mar 1;316(3):G350-G365. doi: 10.1152/ajpgi.00080.2018.

Sæle Ø, Rød KEL, Quinlivan VH, Li S, Farber SA.

A novel system to quantify intestinal lipid digestion and transport.

*Biochimica et Biophysica Acta Molecular and Cell Biology of Lipids*. 2018 Sep;1863(9):948-957. doi: 10.1016/j.bbalip.2018.05.006.

Shuda JR, Butler VG, Vary R, Noushad NF, Farber SA

A Three-Year Model for Building a Sustainable Science Outreach and Teacher Collaborative

*Journal of STEM Outreach*. June 2019 <https://doi.org/10.15695/jstem/v2i1.12>

Talhouarne GJS, Gall JG.

Lariat intronic RNAs in the cytoplasm of vertebrate cells.

*Proceedings of the National Academy of Sciences of the United States of America*. 2018 Aug 21;115(34):E7970-E7977. doi: 10.1073/pnas.1808816115

Tiwary AK, Zheng Y.

Protein phase separation in mitosis.

*Current Opinion in Cell Biology*. 2019 Jun 5;60:92-98. doi: 10.1016/j.ceb.2019.04.011

Wang L, Dou K, Moon S, Tan FJ, Zhang ZZ.

Hijacking Oogenesis Enables Massive Propagation of LINE and Retroviral Transposons.

*Cell*. 2018 Aug 23;174(5):1082-1094.e12. doi: 10.1016/j.cell.2018.06.040.

Yu B, Lin YA, Parhad SS, Jin Z, Ma J, Theurkauf WE, Zhang ZZ, Huang Y.

Structural insights into Rhino-Deadlock complex for germline piRNA cluster specification.

*EMBO Reports*. 2018 Jul; 19(7). pii: e45418. doi: 10.15252/embr.201745418.

Yue S, Zheng X, Zheng Y.

Cell-type-specific role of lamin-B1 in thymus development and its inflammation-driven reduction in thymus aging.

*Aging Cell*. 2019 Apr 9:e12952. doi: 10.1111/accel.12952

Zheng X, Hu J, Yue S, Kristiani L, Kim M, Sauria M, Taylor J, Kim Y, Zheng Y.

Lamins Organize the Global Three-Dimensional Genome from the Nuclear Periphery.

*Molecular Cell*. 2018 Sep 6;71(5):802-815.e7. doi: 10.1016/j.molcel.2018.05.017

### **Geophysical Laboratory**

**Here updated through September 1, 2019. The list is regularly updated on the Geophysical Laboratory web site (<http://gl.carnegiescience.edu>).**

- 5760 Ahart, M., M. Somayazulu, D. Popov, Y. Xie, X. Long, Z.-G. Ye, R. E. Cohen, and R. J. Hemley, Pressure-induced transitions in ferroelectric single-crystal  $\text{PbZr}_{0.54}\text{Ti}_{0.46}\text{O}_3$ , *Ferroelectrics* **535**, 106-113, 2018.
- 5706 Anzellini, S., A. K. Kleppe, D. Daisenberger, M. T. Wharmby, R. Giampaoli, S. Boccato, M. A. Baron, F. Miozzi, D. S. Keeble, A. Ross, S. Gurney, J. Thompson, G. Knap, M. Booth, L. Hudson, D. Hawkins, M. J. Walter, and H. Wilhelm, Laser-heating system for high-pressure X-ray diffraction at the Extreme Conditions beamline I15 at Diamond Light Source, *J. Synchrotron Rad.* **25**, 1860-1868, 2018.
- 5812 Anzures, B. A., H. C. Watson, Y. Kono, T. Yu, and Y. Wang, Compression of porous aluminum: combined ultrasonic and microtomography measurements with lattice-Boltzmann permeability simulations, *High Pressure Res.* **39**, 438-456, 2019.
- 5820 Boujibar, A., M. Habermann, K. Richter, D. K. Ross, K. Pando, M. Richter, B. A. Chidester, and L. R. Danielson, U, Th, and K partitioning between metal, silicate, and sulfide and implications for Mercury's structure, volatile content, and radioactive heat production, *Am. Mineral.* **104**, 1221-1237, 2019.
- 5800 Briggs, R., F. Coppari, M. G. Gorman, R. F. Smith, S. J. Tracy, A. L. Coleman, A. Fernandez-Pañella, M. Millot, J. H. Eggert, and D. E. Fratanduono, Measurement of body-centered cubic gold and melting under shock compression, *Phys. Rev. Lett.* **123**, 045701, 2019.
- 5811 Brucato, J. R., and T. Fornaro, Role of mineral surfaces in prebiotic processes and space-like conditions, in *Biosignatures for Astrobiology*, B. Cavalazzi and F. Westall, eds., pp. 183-204, Springer, Cham, Switzerland, 2019.
- 5686 Calder, S., K. An, R. Boehler, C. R. Dela Cruz, M. D. Frontzek, M. Guthrie, B. Haberl, A. Huq, S. A. J. Kimber, J. Liu, J. J. Molaison, J. Neufeind, K. Page, A. M. dos Santos, K. M. Taddei, C. Tulk, and M. G. Tucker, A suite-level review of the neutron powder diffraction instruments at Oak Ridge National Laboratory, *Rev. Sci. Instrum.* **89**, 092701, 2018.
- 5770 Callefo, F., F. Ricardi-Branco, G. A. Hartmann, D. Galante, F. Rodrigues, L. Maldanis, E. Yokoyama, V. C. Teixeira, N. Noffke, D. M. Bower, E. S. Bullock, A. H. Braga, J. A. H. Coaquira, and M. A. Fernandes, Evaluating iron as a biomarker of rhythmites – an example from the last Paleozoic ice age of Gondwana, *Sediment. Geol.* **383**, 1-15, 2019.
- 5763 Celliers, P. M., M. Millot, S. Brygoo, R. S. McWilliams, D. E. Fratanduono, J. R. Rygg, A. F. Goncharov, P. Loubeyre, J. H. Eggert, J. L. Peterson, N. B. Meezan, S. Le Pape, G. W. Collins, R. Jeanloz, and R. J. Hemley, Response to comment on "Insulator-metal transition in dense fluid deuterium", *Science* **363**, eaaw1970, 2019.

- 5822 Chan, M. A., N. W. Hinman, S. L. Potter-McIntyre, K. E. Schubert, R. J. Gillams, S. M. Awramik, P. J. Boston, D. M. Bower, D. J. Des Marais, J. D. Farmer, T. Z. Jia, P. L. King, R. M. Hazen, R. J. L evell e, D. Papineau, K. R. Rempfert, M. S anchez-Rom an, J. R. Spear, G. Southam, J. C. Stern, and H. J. Cleaves II, Deciphering biosignatures in planetary contexts, *Astrobiology* 19, 1075-1102, 2019.
- 5805 Chapagain, K., D. E. Brown, S. Kolesnik, S. Lapidus, B. Haberl, J. Molaison, C. Lin, C. Kenney-Benson, C. Park, J. Pietosa, E. Markiewicz, B. Andrzejewski, J. W. Lynn, S. Rosenkranz, B. Dabrowski, and O. Chmaissem, Tunable multiferroic order parameters in  $\text{Sr}_{1-x}\text{Ba}_x\text{Mn}_{1-y}\text{Ti}_y\text{O}_3$ , *Phys. Rev. Mater.* 3, 084401, 2019.
- Chen, L.-C., P.-Q. Chen, V. V. Struzhkin, A. F. Goncharov, Q. Zhang, Z. Ren, and X.-J. Chen, Enhancement of thermoelectric performance across the topological phase transition in dense lead selenide, *Nature Mater.*, in press.
- 5720 Childs, C., K. V. Lawler, A. L. Hector, S. Petitgirard, O. Noked, J. S. Smith, D. Daisenberger, L. Bezacier, M. Jura, C. J. Pickard, and A. Salamat, Covalency is frustrating:  $\text{La}_2\text{Sn}_2\text{O}_7$  and the nature of bonding in pyrochlores under high pressure-temperature conditions, *Inorg. Chem.* 57, 15051-15061, 2018.
- 5709 Chu, X., J. J. Ague, M. Tian, E. F. Baxter, D. Rumble III, and C. P. Chamberlain, Testing for rapid thermal pulses in the crust by modeling garnet growth-diffusion-resorption profiles in a UHT metamorphic 'hot spot', New Hampshire, USA, *J. Petrol.* 59, 1939-1964, 2018.
- 5682 Cohen, R. E., Morphing into action, *Nature* 562, 48-49, 2018.
- 5739 Deng, L., Y. Kono, and G. Shen, Sound wave velocities of  $\text{Fe}_5\text{Si}$  at high-pressure and high-temperature conditions: implications to lunar and planetary cores, *Am. Mineral.* 104, 291-299, 2019.
- 5693 Dimitrievska, M., J.-N. Chotard, R. Janot, A. Faraone, W. S. Tang, A. V. Skripov, and T. J. Udovic, Tracking the progression of anion reorientational behavior between  $\alpha$ -phase and  $\beta$ -phase alkali-metal silanides,  $\text{MSiH}_3$ , by quasielastic neutron scattering, *J. Phys. Chem. C* 122, 23985-23997, 2018.
- 5825 Donaldson Hanna, K. L., D. L. Schrader, E. A. Cloutis, G. D. Cody, A. J. King, T. J. McCoy, D. M. Applin, J. P. Mann, N. E. Bowles, J. R. Brucato, H. C. Connolly, Jr., E. Dotto, L. P. Keller, L. F. Lim, B. E. Clark, V. E. Hamilton, C. Lantz, D. S. Lauretta, S. S. Russell, and P. F. Schofield, Spectral characterization of analog samples in anticipation of OSIRIS-REx's arrival at Bennu: a blind test study, *Icarus* 319, 701-723, 2019.

- 5675 Dong, X., L. Wang, K. Li, H. Zheng, Y. Wang, Y. Meng, H. Shu, H. K. Mao, S. Feng, and C. Jin, Tailored synthesis of the narrowest zigzag graphene nanoribbon structure by compressing the lithium acetylide under high temperature, *J. Phys. Chem. C* **122**, 20506-20512, 2018.
- 5753 Drewitt, J. W. E., M. J. Walter, H. Zhang, S. C. McMahon, D. Edwards, B. J. Heinen, O. T. Lord, S. Anzellini, and A. K. Kleppe, The fate of carbonate in oceanic crust subducted into Earth's lower mantle, *Earth Planet. Sci. Lett.* **511**, 213-222, 2019.
- 5813 Driscoll, P., and Z. Du, Geodynamo conductivity limits, *Geophys. Res. Lett.* **46**, 7982-7989, 2019.
- 5803 Du, Z., A. Boujibar, P. Driscoll, and Y. Fei, Experimental constraints on an MgO exsolution-driven geodynamo, *Geophys. Res. Lett.* **46**, 7379-7385, 2019.
- 5752 Dugu, S., K. K. Mishra, D. K. Pradhan, S. Kumari, and R. S. Katiyar, Coupled phonons and magnetic orderings in GaFeO<sub>3</sub>: Raman and magnetization studies, *J. Appl. Phys.* **125**, 064101, 2019.
- 5708 Duncan, M. S., N. C. Schmerr, C. M. Bertka, and Y. Fei, Extending the solidus for a model iron-rich Martian mantle composition to 25 GPa, *Geophys. Res. Lett.* **45**, 10211-10220, 2018.
- Elardo, S. M., The origin and rationale of lunar magma ocean theory, in *Encyclopedia of Lunar Science*, B. Cudnik, ed., Springer, in press.
- 5765 Elardo, S. M., A. Shahar, T. D. Mock, and C. K. Sio, The effect of core composition on iron isotope fractionation between planetary cores and mantles, *Earth Planet. Sci. Lett.* **513**, 124-134, 2019.
- 5738 Estrada, C. F., D. A. Sverjensky, and R. M. Hazen, Selective adsorption of aspartate facilitated by calcium on brucite [Mg(OH)<sub>2</sub>], *ACS Earth Space Chem.* **3**, 1-7, 2019.
- 5740 Fan, D., S. Fu, J. Yang, S. N. Tkachev, V. B. Prakapenka, and J.-F. Lin, Elasticity of single-crystal periclase at high pressure and temperature: the effect of iron on the elasticity and seismic parameters of ferropericlase in the lower mantle, *Am. Mineral.* **104**, 262-275, 2019.
- 5782 Foustoukos, D. I., Hydrothermal oxidation of Os, *Geochim. Cosmochim. Acta* **255**, 237-246, 2019.
- 5681 Frantti, J., Y. Fujioka, J. J. Molaison, R. Boehler, B. Haberl, C. A. Tulk, and A. M. dos Santos, Compression mechanisms of ferroelectric PbTiO<sub>3</sub> via high pressure neutron scattering, *J. Phys.: Condens. Matter* **30**, 435702, 2018.
- 5769 Frisby, C., D. I. Foustoukos, and M. Bizimis, Rare earth element uptake during olivine/water hydrothermal interaction, *Lithos* **332-333**, 147-161, 2019.

- 5670 Garber, J. M., S. Maurya, J.-A. Hernandez, M. S. Duncan, L. Zeng, H. L. Zhang, U. Faul, C. McCammon, J.-P. Montagner, L. Moresi, B. A. Romanowicz, R. L. Rudnick, and L. Stixrude, Multidisciplinary constraints on the abundance of diamond and eclogite in the cratonic lithosphere, *Geochem. Geophys. Geosyst.* **19**, 2062-2086, 2018.
- 5672 Gavriiliuk, A. G., V. V. Struzhkin, A. A. Mironovich, I. S. Lyubutin, J. F. Lin, A. G. Ivanova, R. Chow, and Y. Xiao, Low-temperature *P-T* phase diagram of the (Mg, Fe)SiO<sub>3</sub> perovskite, *JETP Lett.* **107**, 705-712, 2018.
- 5716 Giunta, T., E. D. Young, O. Warr, I. Kohl, J. L. Ash, A. Martini, S. O. C. Mundle, D. Rumble, I. Pérez-Rodríguez, M. Wasley, D. E. LaRowe, A. Gilbert, and B. Sherwood Lollar, Methane sources and sinks in continental sedimentary systems: new insights from paired clumped isotopologues <sup>13</sup>CH<sub>3</sub>D and <sup>12</sup>CH<sub>2</sub>D<sub>2</sub>, *Geochim. Cosmochim. Acta* **245**, 327-351, 2019.
- 5702 Goldberger, D., C. Park, E. Evlyukhin, P. Cifligu, and M. Pravica, Cationic dependence of X-ray induced damage in strontium and barium nitrate, *J. Phys. Chem. A* **122**, 8722-8728, 2018.
- Goncharov, A., L. Kong, and H. K. Mao, High-pressure integrated synchrotron infrared spectroscopy system at the Shanghai Synchrotron Radiation Facility, *Rev. Sci. Instrum.*, in press.
- 5785 Goncharov, A. F., and Y. A. Freiman, Comment on "High-pressure behavior of hydrogen and deuterium at low temperatures", *Phys. Rev. Lett.* **122**, 199601, 2019.
- Grew, E. S., G. Hystad, M. Toapanta, A. Eleish, A. Ostroverkhova, J. Golden, and R. Hazen, Lithium mineral evolution and ecology: comparison with boron and beryllium, *Eur. J. Mineral.*, in press.
- Gu, T., V. Stagno, and Y. Fei, Partition coefficient of phosphorus between liquid metal and silicate melt with implications for the Martian magma ocean, *Phys. Earth Planet. Inter.*, in press.
- 5668 Gu, Z., S. Pandya, A. Samanta, S. Liu, G. Xiao, C. J. G. Meyers, A. R. Damodaran, H. Barak, A. Dasgupta, S. Saremi, A. Polemi, L. Wu, A. A. Podpirka, A. Will-Cole, C. J. Hawley, P. K. Davies, R. A. York, I. Grinberg, L. W. Martin, and J. E. Spanier, Resonant domain-wall-enhanced tunable microwave ferroelectrics, *Nature* **560**, 622-627, 2018.
- 5735 Guan, Z., Q. Li, H. Zhang, P. Shen, L. Zheng, S. Chu, C. Park, X. Hong, R. Liu, P. Wang, B. Liu, and G. Shen, Pressure induced transformation and subsequent amorphization of monoclinic Nb<sub>2</sub>O<sub>5</sub> and its effect on optical properties, *J. Phys.: Condens. Matter* **31**, 105401, 2019.

- 5754 Guerette, M., A. Poltorak, Y. Fei, and T. A. Strobel, Permanent densification of silica glass for pressure calibration between 9 and 20 GPa at ambient temperature, *High Pressure Res.* *39*, 117-130, 2019.
- 5715 Guerette, M., M. D. Ward, K. A. Lokshin, A. T. Wong, H. Zhang, S. Stefanoski, O. Kurakevych, Y. Le Godec, S. J. Juhl, N. Alem, Y. Fei, and T. A. Strobel, Synthesis and properties of single-crystalline Na<sub>4</sub>Si<sub>24</sub>, *Cryst. Growth Des.* *18*, 7410-7418, 2018.
- 5775 Guo, E.-J., R. Desautels, D. Lee, M. A. Roldan, Z. Liao, T. Charlton, H. Ambaye, J. Molaison, R. Boehler, D. Keavney, A. Herklotz, T. Z. Ward, H. N. Lee, and M. R. Fitzsimmons, Exploiting symmetry mismatch to control magnetism in a ferroelastic heterostructure, *Phys. Rev. Lett.* *122*, 187202, 2019.
- 5787 Guthrie, M., R. Boehler, J. J. Molaison, B. Haberl, A. M. dos Santos, and C. Tulk, Structure and disorder in ice VII on the approach to hydrogen-bond symmetrization, *Phys. Rev. B* *99*, 184112, 2019.
- 5685 Haberl, B., S. Dissanayake, Y. Wu, D. A. A. Myles, A. M. dos Santos, M. Loguillo, G. M. Rucker, D. P. Armitage, M. Cochran, K. M. Andrews, C. Hoffmann, H. Cao, M. Matsuda, F. Meilleur, F. Ye, J. J. Molaison, and R. Boehler, Next-generation diamond cell and applications to single-crystal neutron diffraction, *Rev. Sci. Instrum.* *89*, 092902, 2018.
- 5823 Haberl, B., J. J. Molaison, J. C. Neufeind, L. L. Daemen, and R. Boehler, Modified Bridgman anvils for high pressure synthesis and neutron scattering, *High Pressure Res.* *39*, 426-437, 2019.
- 5789 Hao, J., D. A. Sverjensky, and R. M. Hazen, Redox states of Archean surficial environments: the importance of H<sub>2,g</sub> instead of O<sub>2,g</sub> for weathering reactions, *Chem. Geol.* *521*, 49-58, 2019.
- 5762 Hazen, R. M., Earth in five reactions: grappling with meaning and value in science, *Am. Mineral.* *104*, 468-470, 2019.
- 5767 Hazen, R. M., *Symphony in C: Carbon and the Evolution of (Almost) Everything*, W. W. Norton & Co., New York and William Collins, London, 282 pp., 2019.
- 5788 Hazen, R. M., An evolutionary system of mineralogy: proposal for a classification of planetary materials based on natural kind clustering, *Am. Mineral.* *104*, 810-816, 2019.
- 5797 Hazen, R. M., *Istoriia Zemli [The Story of Earth]* (in Ukrainian), KK Klub Simeinoho Dizvillia, Kharkhiv, Ukraine, 288 pp., 2017.



- Hazen, R. M., Y. Bromberg, R. T. Downs, A. Eleish, P. G. Falkowski, P. Fox, D. Giovannelli, D. R. Hummer, G. Hystad, J. J. Golden, A. H. Knoll, C. Li, C. Liu, E. K. Moore, S. M. Morrison, A. D. Muscente, A. Prabhu, J. Ralph, M. Y. Rucker, S. E. Runyon, L. A. Warden, and H. Zhong, Deep carbon through deep time: data-driven insights, in *Deep Carbon: Past to Present*, B. Orcutt, R. Dasgupta, and I. Daniel, eds., Cambridge University Press, in press.
- 5796 Hazen, R. M., R. T. Downs, A. Eleish, P. Fox, O. C. Gagné, J. J. Golden, E. S. Grew, D. R. Hummer, G. Hystad, S. V. Krivovichev, C. Li, C. Liu, X. Ma, S. M. Morrison, F. Pan, A. J. Pires, A. Prabhu, J. Ralph, S. E. Runyon, and H. Zhong, Data-driven discovery in mineralogy: recent advances in data resources, analysis, and visualization, *Engineering* 5, 397-405, 2019.
- 5768 Hazen, R. M., and J. Zalasiewicz, Rock components – synthetic mineral-like compounds, in *The Anthropocene as a Geological Time Unit*, J. Zalasiewicz et al., eds., pp. 42-45, Cambridge University Press, New York, 2019.
- 5808 Heck, P. R., C. Herd, J. N. Grossman, D. Badjukov, A. Bouvier, E. Bullock, H. Chennaoui-Aoudjehane, V. Debaille, T. L. Dunn, D. S. Ebel, L. Ferrière, L. Garvie, J. Gattacceca, M. Gounelle, R. Herd, T. Ireland, E. Jacquet, R. J. Macke, T. McCoy, F. M. McCubbin, T. Mikouchi, K. Metzler, M. Roskosz, C. Smith, M. Wadhwa, L. Welzenbach-Fries, T. Yada, A. Yamaguchi, R. A. Zeigler, and M. Zolensky, Best practices for the use of meteorite names in publications, *Meteorit. Planet. Sci.* 54, 1397-1400, 2019.
- 5724 Hin, R. C., A. D. Burnham, D. Gianolio, M. J. Walter, and T. Elliott, Molybdenum isotope fractionation between Mo<sup>4+</sup> and Mo<sup>6+</sup> in silicate liquid and metallic Mo, *Chem. Geol.* 504, 177-189, 2019.
- 5809 Holtgrewe, N., E. Greenberg, C. Prescher, V. B. Prakapenka, and A. F. Goncharov, Advanced integrated optical spectroscopy system for diamond anvil cell studies at GSECARS, *High Pressure Res.* 39, 457-470, 2019.
- 5773 Hou, M., Q. Zhang, R. Tao, H. Liu, Y. Kono, H.-K. Mao, W. Yang, B. Chen, and Y. Fei, Temperature-induced amorphization in CaCO<sub>3</sub> at high pressure and implications for recycled CaCO<sub>3</sub> in subduction zones, *Nature Commun.* 10, 1963, 2019.
- 5816 Houghton, J. L., D. I. Foustoukos, and D. A. Fike, The effect of O<sub>2</sub> and pressure on thiosulfate oxidation by *Thiomicrospira thermophila*, *Geobiology* 17, 564-576, 2019.
- Huang, H., C. Leng, Q. Wang, G. Young, X. Liu, Y. Wu, F. Xu, and Y. Fei, Equation of state for shocked Fe-8.6 wt% Si up to 240 GPa and 4,670 K, *J. Geophys. Res. Solid Earth*, in press.

- 5781 Huang, Y., Y. He, H. Sheng, X. Lu, H. Dong, S. Samanta, H. Dong, X. Li, D. Y. Kim, H. K. Mao, Y. Liu, H. Li, H. Li, and L. Wang, Li-ion battery material under high pressure: amorphization and enhanced conductivity of  $\text{Li}_4\text{Ti}_5\text{O}_{12}$ , *Natl. Sci. Rev.* **6**, 239-246, 2019.
- 5766 Hystad, G., A. Eleish, R. M. Hazen, S. M. Morrison, and R. T. Downs, Bayesian estimation of Earth's undiscovered mineralogical diversity using noninformative priors, *Math. Geosci.* **51**, 401-417, 2019.
- Hystad, G., S. M. Morrison, and R. M. Hazen, Statistical analysis of mineral evolution and mineral ecology: the current state and a vision for the future, *Appl. Comput. Geosci.*, in press.
- 5756 International MSR Objectives and Samples Team (iMOST), D. W. Beaty, M. M. Grady, H. Y. McSween, E. Sefton-Nash, B. L. Carrier, F. Altieri, Y. Amelin, E. Ammannito, M. Anand, L. G. Benning, J. L. Bishop, L. E. Borg, D. Boucher, J. R. Brucato, H. Busemann, K. A. Campbell, A. D. Czaja, V. Debaille, D. J. Des Marais, M. Dixon, B. L. Ehlmann, J. D. Farmer, D. C. Fernandez-Remolar, J. Filiberto, J. Fogarty, D. P. Glavin, Y. S. Goreva, L. J. Hallis, A. D. Harrington, E. M. Hausrath, C. D. K. Herd, B. Horgan, M. Humanyun, T. Kleine, J. Kleinhenz, R. Mackelprang, N. Mangold, L. E. Mayhew, J. T. McCoy, F. M. McCubbin, S. M. McLennan, D. E. Moser, F. Moynier, J. F. Mustard, P. B. Niles, G. G. Ori, F. Raulin, P. Rettberg, M. A. Rucker, N. Schmitz, S. P. Schwenzer, M. A. Sephton, R. Shaheen, Z. D. Sharp, D. L. Schuster, S. Siljestrom, C. L. Smith, J. A. Spry, A. Steele, T. D. Swindle, I. L. ten Kate, N. J. Tosca, T. Usui, M. J. Van Kranendonk, M. Wadhwa, B. P. Weiss, S. C. Werner, F. Westall, R. M. Wheeler, J. Zipfel, and M. P. Zorzano, The potential science and engineering value of samples delivered to Earth by Mars sample return, *Meteorit. Planet. Sci.* **54**, 667-671, 2019.
- 5696 Ji, M., H. Wang, Y. Gong, H. Cheng, L. Zheng, X. Li, L. Huang, J. Liu, Z. Nie, Q. Zeng, M. Xu, J. Liu, X. Wang, P. Qian, C. Zhu, J. Wang, X. Li, and J. Zhang, High pressure induced in situ solid-state phase transformation of nonepitaxial grown metal@semiconductor nanocrystals, *J. Phys. Chem. Lett.* **9**, 6544-6549, 2018.
- 5703 Kaluarachchi, U. S., L. Xiang, J. Ying, T. Kong, V. Struzhkin, A. Gavriiliuk, S. L. Bud'ko, and P. C. Canfield, Collapse of the Kondo state and ferromagnetic quantum phase transition in  $\text{YbFe}_2\text{Zn}_{20}$ , *Phys. Rev. B* **98**, 174405, 2018.
- 5806 Kebukawa, Y., C. M. O'D. Alexander, and G. D. Cody, Comparison of FT-IR spectra of bulk and acid insoluble organic matter in chondritic meteorites: an implication for missing carbon during demineralization, *Meteorit. Planet. Sci.* **54**, 1632-1641, 2019.
- 5745 Kim, M., R. Hrubciak, J. Smith, and C.-S. Yoo, Thermochemical reactions of Al-based intermetallic composites to AlN, *Combust. Flame* **200**, 115-124, 2019.

- 5814 Kimmel, A. V., O. T. Gindele, D. M. Duffy, and R. E. Cohen, Giant electrocaloric effect at the antiferroelectric-to-ferroelectric phase boundary in  $\text{Pb}(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$ , *Appl. Phys. Lett.* **115**, 023902, 2019.
- 5683 Klein, R. A., J. P. S. Walsh, S. M. Clarke, Y. Guo, W. Bi, G. Fabbris, Y. Meng, D. Haskel, E. E. Alp, R. P. Van Duyne, S. D. Jacobsen, and D. E. Freedman, Impact of pressure on magnetic order in jarosite, *J. Am. Chem. Soc.* **140**, 12001-12009, 2018.
- 5711 Kruglov, I. A., A. G. Kvashnin, A. F. Goncharov, A. R. Oganov, S. S. Lobanov, N. Holtgrewe, S. Jiang, V. B. Prakapenka, E. Greenberg, and A. V. Yanilkin, Uranium polyhydrides at moderate pressures: prediction, synthesis, and expected superconductivity, *Sci. Adv.* **4**, eaat9776, 2018.
- 5673 Kurzydłowski, D., M. Derzsi, P. Barone, A. Grzelak, V. Struzhkin, J. Lorenzana, and W. Grochala, Dramatic enhancement of spin-spin coupling and quenching of magnetic dimensionality in compressed silver difluoride, *Chem. Commun.* **54**, 10252-10255, 2018.
- 5821 Levi, A., and R. E. Cohen, The equation of state of MH-III: a possible deep  $\text{CH}_4$  reservoir in Titan, super-Titan exoplanets, and moons, *Astrophys. J.* **882**, 71, 2019.
- 5742 Lewis, K. W., S. Peters, K. Gonter, S. Morrison, N. Schmerr, A. R. Vasavada, and T. Gabriel, A surface gravity traverse on Mars indicates low bedrock density at Gale crater, *Science* **363**, 535-537, 2019.
- 5776 Li, N., F. Fan, F. Sun, Y. Wang, Y. Zhao, F. Liu, Q. Zhang, D. Ikuta, Y. Xiao, P. Chow, S. M. Heald, C. Sun, D. Brewe, A. Li, X. Lü, H. K. Mao, D. I. Khomskii, H. Wu, and W. Yang, Pressure-enhanced interplay between lattice, spin, and charge in the mixed perovskite  $\text{La}_2\text{FeMnO}_6$ , *Phys. Rev. B* **99**, 195115, 2019.
- 5694 Lin, C., J. S. Smith, X. Liu, J. S. Tse, and W. Yang, Venture into water's No Man's Land: structural transformations of solid  $\text{H}_2\text{O}$  under rapid compression and decompression, *Phys. Rev. Lett.* **121**, 225703, 2018.
- 5718 Lin, J.-F., Z. Mao, J. Yang, and S. Fu, Elasticity of lower-mantle bridgmanite, *Nature* **564**, E18-E26, 2018.
- 5704 Lin, Y.-T., T.-H. Tu, C.-L. Wei, D. Rumble, L.-H. Lin, and P.-L. Wang, Steep redox gradient and biogeochemical cycling driven by deeply sourced fluids and gases in a terrestrial mud volcano, *FEMS Microbiol. Ecol.* **94**, fiy171, 2018.
- 5710 Linn, N. M. K., M. Mandal, B. Li, Y. Fei, and K. Landskron, Insights into the hydrothermal metastability of stishovite and coesite, *ACS Omega* **3**, 14225-14228, 2018.

- 5691 Liu, B., W. Cui, J. Shi, L. Zhu, J. Chen, S. Lin, R. Su, J. Ma, K. Yang, M. Xu, J. Hao, A. P. Durajski, J. Qi, Y. Li, and Y. Li, Effect of covalent bonding on the superconducting critical temperature of the H-S-Se system, *Phys. Rev. B* **98**, 174101, 2018.
- 5819 Liu, C., S. E. Runyon, A. H. Knoll, and R. M. Hazen, The same and not the same: ore geology, mineralogy and geochemistry of Rodinia assembly versus other supercontinents, *Earth-Sci. Rev.* **196**, 102860, 2019.
- 5723 Liu, F., J. Li, K. Zhang, S. Peng, H. Huang, M. Yan, N. Li, Q. Zhang, S. Guo, X. Lü, P. Cai, L. Yin, S. Zhou, W. Duan, J. Shen, and W. Yang, Pressure-induced Lifshitz transition in the type II Dirac semimetal PtTe<sub>2</sub>, *Sci. China: Phys., Mech. Astron.* **62**, 48211, 2019.
- 5804 Liu, G., L. P. Kong, W. G. Yang, and H. K. Mao, Pressure engineering of photovoltaic perovskites, *Mater. Today* **27**, 91-106, 2019.
- 5687 Liu, G., Z. Yu, H. Liu, S. A. T. Redfern, X. Feng, X. Li, Y. Yuan, K. Yang, N. Hirao, S. I. Kawaguchi, X. Li, L. Wang, and Y. Ma, Unexpected semimetallic BiS<sub>2</sub> at high pressure and high temperature, *J. Phys. Chem. Lett.* **9**, 5785-5791, 2018.
- 5679 Liu, H., I. I. Naumov, Z. M. Geballe, M. Somayazulu, J. S. Tse, and R. J. Hemley, Dynamics and superconductivity in compressed lanthanum superhydride, *Phys. Rev. B* **98**, 100102(R), 2018.
- 5730 Liu, J., Q. Hu, W. Bi, L. Yang, Y. Xiao, P. Chow, Y. Meng, V. B. Prakapenka, H. K. Mao, and W. L. Mao, Altered chemistry of oxygen and iron under deep Earth conditions, *Nature Commun.* **10**, 153, 2019.
- Lobanov, S., and A. Goncharov, Pressure-induced sp<sup>2</sup>-sp<sup>3</sup> transition in carbon-bearing phases, in *Carbon in Planetary Interiors*, C. Manning, J.-F. Lin, and W. L. Mao, eds., American Geophysical Union, in press.
- 5795 Mao, H. K., and C. M. Schiffries, Deep volatiles as the key for energy and environments of the four-dimensional Earth system, *Engineering* **5**, 393-394, 2019.
- 5750 Marnocha, C. L., C. R. Sabanayagam, S. Modla, D. H. Powell, P. A. Henri, A. S. Steele, T. E. Hanson, S. M. Webb, and C. S. Chan, Insights into the mineralogy and surface chemistry of extracellular biogenic S<sup>0</sup> globules produced by *Chlorobaculum tepidum*, *Front. Microbiol.* **10**, 271, 2019.
- 5790 Martirosyan, N. S., K. D. Litasov, S. S. Lobanov, A. F. Goncharov, A. Shatskiy, H. Ohfuji, and V. Prakapenka, The Mg-carbonate-Fe interaction: implication for the fate of subducted carbonates and formation of diamond in the lower mantle, *Geosci. Front.* **10**, 1449-1458, 2019.
- 5807 Meyer, M., P. J. Harries, and R. W. Portell, A first report of microtektites from the shell beds of southwestern Florida, *Meteorit. Planet. Sci.* **54**, 1594-1603, 2019.

- 5810 Mikhail, S., F. M. McCubbin, F. E. Jenner, S. B. Shirey, D. Rumble, and R. Bowden, Diamondites: evidence for a distinct tectono-thermal diamond-forming event beneath the Kaapvaal craton, *Contrib. Mineral. Petrol.* **174**, 71, 2019.
- 5721 Mohanty, H. S., T. Dam, H. Borkar, D. K. Pradhan, K. K. Mishra, A. Kumar, B. Sahoo, P. K. Kulriya, C. Cazorla, J. F. Scott, and D. K. Pradhan, Structural transformations and physical properties of  $(1-x)\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3 - x\text{BaTiO}_3$  solid solutions near a morphotropic phase boundary, *J. Phys.: Condens. Matter* **31**, 075401, 2019.
- 5727 Montgomery, J. M., M. J. Lipp, Z. Jenei, Y. Meng, and W. J. Evans, A simple and portable multi-channel pyrometer allowing temperature measurements down to 800 K on the microsecond scale, *Rev. Sci. Instrum.* **89**, 125117, 2018.
- Morrison, S. M., R. T. Downs, A. Eleish, P. Fox, D. R. Hummer, G. Hystad, J. J. Golden, C. Liu, A. Prabhu, S. Zahirovic, and R. M. Hazen, Visualizing carbon minerals: recent advances in C mineral evolution, mineral ecology, and network analysis, *Front. Earth Sci.*, in press.
- 5722 Morrison, S. M., S. E. Runyon, and R. M. Hazen, The paleomineralogy of the Hadean Eon revisited, *Life* **8**, 64, 2018.
- 5751 Muscente, A. D., N. Bykova, T. H. Boag, L. A. Buatois, M. G. Mángano, A. Eleish, A. Prabhu, F. F. Pan, M. B. Meyer, J. D. Schiffbauer, P. Fox, R. M. Hazen, and A. H. Knoll, Ediacaran biozones identified with network analysis provide evidence for pulsed extinctions of early complex life, *Nature Commun.* **10**, 911, 2019.
- 5666 Mysen, B., Redox-controlled mechanisms of C and H isotope fractionation between silicate melt and COH fluid in the Earth's interior, *Prog. Earth Planet. Sci.* **5**, 46, 2018.
- 5690 Mysen, B., Solution mechanisms of COHN fluids in melts to upper mantle temperature, pressure, and redox conditions, *Am. Mineral.* **103**, 1780-1788, 2018.
- 5736 Mysen, B., Aqueous fluids as transport medium at high pressure and temperature:  $\text{Ti}^{4+}$  solubility, solution mechanisms, and fluid composition, *Chem. Geol.* **505**, 57-65, 2019.
- 5783 Mysen, B., Nitrogen in the Earth: abundance and transport, *Prog. Earth Planet. Sci.* **6**, 38, 2019.
- 5755 Mysen, B., and P. Richet, *Silicate Glasses and Melts*, 2nd ed., Elsevier, Amsterdam, 708 pp., 2019.
- Mysen, B. O., Solubility of volatiles, in *Encyclopedia of Glass Science. Technology, History and Culture*, P. Richet, ed., Wiley-Interscience, in press.
- Mysen, B. O., Structure of chemically complex silicate systems, in *Encyclopedia of Glass Science. Technology, History and Culture*, P. Richet, ed., Wiley-Interscience, in press.

- 5744 Najiba, S., S. J. Juhl, M. Mandal, C. Liu, A. Durygin, J. H. Chen, Y. Fei, N. Alem, and K. Landskron, Synthesis of nanopolycrystalline mesoporous diamond from periodic mesoporous carbon: mesoporosity increases with increasing synthesis pressure, *Scr. Mater.* *162*, 350-354, 2019.
- 5780 Ohira, I., Y. Kono, Y. Shibazaki, C. Kenney-Benson, A. Masuno, and G. Shen, Ultrahigh pressure structural changes in a 60 mol. % Al<sub>2</sub>O<sub>3</sub>-40 mol. % SiO<sub>2</sub> glass, *Geochem. Perspect. Lett.* *10*, 41-45, 2019.
- 5699 Pang, H.-J., L.-C. Chen, Z.-Y. Cao, H. Yu, C.-G. Fu, T.-J. Zhu, A. F. Goncharov, and X.-J. Chen, Mode Grüneisen parameters of an efficient thermoelectric half-Heusler, *J. Appl. Phys.* *124*, 195107, 2018.
- 5713 Patwardhan, S., D. I. Foustoukos, D. Gioyannelli, M. Yücel, and C. Vetriani, Ecological succession of sulfur-oxidizing *Epsilon*- and *Gammaproteobacteria* during colonization of a shallow-water gas vent, *Front. Microbiol.* *9*, 2970, 2018.
- 5818 Peng, C., C. Gao, M. Wang, L. Wu, H. Tang, X. Li, Q. Zhang, T. Ren, F. Zhang, Y. Wang, B. Zhang, B. Gao, Q. Zou, Y. Zhao, Q. Yang, D. Tian, Xiao. H., Gou. H., W. Yang, X. Bai, W. L. Mao, and H. K. Mao, Diffusion-controlled alloying of single-phase multi-principal transition metal carbides with high toughness and low thermal diffusivity, *Appl. Phys. Lett.* *114*, 011905, 2019.
- 5717 Peters, B. J., A. Shahar, R. W. Carlson, J. M. D. Day, and T. D. Mock, A sulfide perspective on iron isotope fractionation during ocean island basalt petrogenesis, *Geochim. Cosmochim. Acta* *245*, 59-78, 2019.
- 5688 Potenti, S., P. Manini, T. Fornaro, G. Poggiali, O. Crescenzi, A. Napolitano, J. R. Brucato, V. Barone, and M. d'Ischia, Solid state photochemistry of hydroxylated naphthalenes on minerals: probing polycyclic aromatic hydrocarbon transformation pathways under astrochemically-relevant conditions, *ACS Earth Space Chem.* *2*, 977-1000, 2018.
- 5695 Pradhan, D. K., S. Kumari, R. K. Vasudevan, E. Strelcov, V. S. Puli, D. K. Pradhan, A. Kumar, J. M. Gregg, A. K. Pradhan, S. V. Kalinin, and R. S. Katiyar, Exploring the magnetoelectric coupling at the composite interfaces of FE/FM/FE heterostructures, *Sci. Rep.* *8*, 17381, 2018.
- 5747 Pradhan, D. K., A. K. Mishra, S. Kumari, A. Basu, M. Somayazulu, E. Gradauskaite, R. M. Smith, J. Gardner, P. W. Turner, A. T. N'Diaye, M. B. Holcomb, R. S. Katiyar, P. Zhou, G. Srinivasan, J. M. Gregg, and J. F. Scott, Studies of multiferroic palladium perovskites, *Sci. Rep.* *9*, 1685, 2019.

- 5771 Puli, V. S., D. K. Pradhan, I. Coondoo, N. Panwar, S. Adireddy, S. Luo, R. S. Katiyar, and D. B. Chrisey, Observation of large enhancement in energy-storage properties of lead-free polycrystalline  $0.5\text{BaZr}_{0.2}\text{Ti}_{0.8}\text{O}_3$ - $0.5\text{Ba}_{0.7}\text{Ca}_{0.3}\text{TiO}_3$  ferroelectric thin films, *J. Phys. D: Appl. Phys.* **52**, 255304, 2019.
- 5698 Rampe, E. B., M. G. A. Lapotre, T. F. Bristow, R. E. Arvidson, R. V. Morris, C. N. Achilles, C. Weitz, D. F. Blake, D. W. Ming, S. M. Morrison, D. T. Vaniman, S. J. Chipera, R. T. Downs, J. P. Grotzinger, R. M. Hazen, T. S. Peretyazhko, B. Sutter, V. Tu, A. S. Yen, B. Horgan, N. Castle, P. I. Craig, D. J. Des Marais, J. Farmer, R. Gellert, A. C. McAdam, J. M. Morookian, P. C. Sarrazin, and A. H. Treiman, Sand mineralogy within the Bagnold Dunes, Gale crater, as observed in situ and from orbit, *Geophys. Res. Lett.* **45**, 9488-9497, 2018.
- 5731 Reekie, C. D. J., F. E. Jenner, D. J. Smythe, E. H. Hauri, E. S. Bullock, and H. M. Williams, Sulfide resorption during crustal ascent and degassing of oceanic plateau basalts, *Nature Commun.* **10**, 82, 2019.
- 5669 Rettie, A. J. E., C. D. Malliakas, A. S. Botana, J. M. Hodges, F. Han, R. Huang, D. Y. Chung, and M. G. Kanatzidis,  $\text{Ag}_2\text{Se}$  to  $\text{KAg}_3\text{Se}_2$ : suppressing order-disorder transitions via reduced dimensionality, *J. Am. Chem. Soc.* **140**, 9193-9202, 2018.
- 5728 Rubel, M. H. K., M. M. Ali, M. S. Ali, R. Parvin, M. M. Rahaman, M. Hossain, M. I. Hossain, A. K. M. A. Islam, and N. Kumada, First-principles study: structural, mechanical, electronic and thermodynamic properties of simple-cubic-perovskite  $(\text{Ba}_{0.62}\text{K}_{0.38})(\text{Bi}_{0.92}\text{Mg}_{0.08})\text{O}_3$ , *Solid State Commun.* **288**, 22-27, 2019.
- 5697 Rumble, D., J. L. Ash, P.-L. Wang, L.-H. Lin, Y.-T. Lin, and T.-H. Tu, Resolved measurements of  $^{13}\text{CDH}_3$  and  $^{12}\text{CD}_2\text{H}_2$  from a mud volcano in Taiwan, *J. Asian Earth Sci.* **167**, 218-221, 2018.
- 5786 Runyon, S. E., F. K. Mazdab, P. Lecumberri-Sanchez, M. Steele-Macinnis, E. Seedorff, and M. D. Dyar, An occurrence of phlogopite-rich alteration in the Yerington district, Nevada, *Can. Mineral.* **57**, 271-294, 2019.
- 5799 Runyon, S. E., P. A. Nickerson, E. Seedorff, M. D. Barton, F. K. Mazdab, P. Lecumberri-Sánchez, and M. Steele-MacInnis, Sodic-calcic family of alteration in porphyry systems of Arizona and adjacent New Mexico, *Econ. Geol.* **114**, 745-770, 2019.
- 5794 Schiffries, C. M., A. J. Mangum, J. L. Mays, M. Hoon-Starr, and R. M. Hazen, The Deep Carbon Observatory: a ten-year quest to study carbon in Earth, *Engineering* **5**, 372-378, 2019.
- 5772 Shahar, A., P. Driscoll, A. Weinberger, and G. Cody, What makes a planet habitable? *Science* **364**, 434-435, 2019.

- 5684 Sharma, A. P., P. Dhakal, D. K. Pradhan, M. K. Behera, B. Xiao, and M. Bahoura, Fabrication and characterization of SnO<sub>2</sub> nanorods for room temperature gas sensors, *AIP Adv.* *8*, 095219, 2018.
- 5726 Sharma, A. P., D. K. Pradhan, B. Xiao, S. K. Pradhan, and M. Bahoura, Lead-free epitaxial ferroelectric heterostructures for energy storage applications, *AIP Adv.* *8*, 125112, 2018.
- 5784 Shibazaki, Y., Y. Kono, and G. Y. Shen, Compressed glassy carbon maintaining graphite-like structure with linkage formation between graphene layers, *Sci. Rep.* *9*, 7531, 2019.
- 5743 Shiell, T. B., C. de Tomas, D. G. McCulloch, D. R. McKenzie, A. Basu, I. Suarez-Martinez, N. A. Marks, R. Boehler, B. Haberl, and J. E. Bradby, *In situ* analysis of the structural transformation of glassy carbon under compression at room temperature, *Phys. Rev. B* *99*, 024114, 2019.
- Shirey, S. B., K. V. Smit, D. G. Pearson, M. J. Walter, S. Aulbach, F. E. Brenker, H. Bureau, A. D. Burnham, P. Cartigny, T. Chacko, D. J. Frost, E. H. Hauri, D. E. Jacob, S. D. Jacobsen, S. C. Kohn, R. W. Luth, S. Mikhail, O. Navon, F. Nestola, P. Nimis, M. Palot, E. M. Smith, T. Stachel, V. Stagno, A. Steele, R. A. Stern, E. Thomassot, A. R. Thomson, and Y. Weiss, Diamonds and the mantle geodynamics of carbon: deep mantle carbon evolution from the diamond record, in *Deep Carbon: Past to Present*, B. N. Orcutt, I. Danielle, and R. Dasgupta, eds., Cambridge University Press, in press.
- 5692 Shkolyar, S., and J. D. Farmer, Biosignature preservation potential in playa evaporites: impacts of diagenesis and implications for Mars exploration, *Astrobiology* *18*, 1460-1478, 2018.
- 5741 Sims, M., S. J. Jaret, E.-R. Carl, B. Rhymer, N. Schrodt, V. Mohrholz, J. Smith, Z. Konopkova, H.-P. Liermann, T. D. Glotch, and L. Ehm, Pressure-induced amorphization in plagioclase feldspars: A time-resolved powder diffraction study during rapid compression, *Earth Planet. Sci. Lett.* *507*, 166-174, 2019.
- 5676 Sio, C. K., M. Roskosz, N. Dauphas, N. R. Bennett, T. D. Mock, and A. Shahar, The isotope effect for Mg-Fe interdiffusion in olivine and its dependence on crystal orientation, composition and temperature, *Geochim. Cosmochim. Acta* *239*, 463-480, 2018.
- 5746 Skoryunov, R. V., O. A. Babanova, A. V. Soloninin, A. V. Skripov, J.-N. Chotard, R. Janot, W. S. Tang, M. Dimitrievska, and T. J. Udovic, Nuclear magnetic resonance study of anion and cation dynamics in CsSiH<sub>3</sub>, *J. Alloys Compounds* *781*, 913-918, 2019.



- 5791 Smith, E. M., S. B. Shirey, S. H. Richardson, F. Nestola, E. S. Bullock, J. Wang, and W. Wang, Reply to: Evidence for two blue (type IIb) diamond populations, *Nature* 570, E28-E29, 2019.
- Solomatova, N. V., R. Caracas, and R. E. Cohen, Carbon speciation and solubility in silicate melts, in *Carbon in Planetary Interiors*, C. Manning, J.-F. Lin, and W. L. Mao, eds., American Geophysical Union, in press.
- 5733 Somayazulu, M., M. Ahart, A. K. Mishra, Z. M. Geballe, M. Baldini, Y. Meng, V. V. Struzhkin, and R. J. Hemley, Evidence for superconductivity above 260 K in lanthanum superhydride at megabar pressures, *Phys. Rev. Lett.* 122, 027001, 2019.
- 5689 Stagno, V., V. Stopponi, Y. Kono, C. E. Manning, and T. Irifune, Experimental determination of the viscosity of Na<sub>2</sub>CO<sub>3</sub> melt between 1.7 and 4.6 GPa at 1200-1700 °C: implications for the rheology of carbonatite magmas in the Earth's upper mantle, *Chem. Geol.* 501, 19-25, 2018.
- 5712 Steele, A., L. G. Benning, R. Wirth, S. Siljeström, M. D. Fries, E. Hauri, P. G. Conrad, K. Rogers, J. Eigenbrode, A. Schreiber, A. Needham, J. H. Wang, F. M. McCubbin, D. Kilcoyne, and J. D. Rodriguez Blanco, Organic synthesis on Mars by electrochemical reduction of CO<sub>2</sub>, *Sci. Adv.* 4, eaat5118, 2018.
- 5725 Steenstra, E. S., J. Berndt, S. Klemme, and W. van Westrenen, LA-ICP-MS analyses of Fe-rich alloys: quantification of matrix effects for 193 nm excimer laser systems, *J. Anal. Atom. Spectrom.* 34, 222-231, 2019.
- 5732 Steenstra, E. S., D. Dankers, J. Berndt, S. Klemme, S. Matveev, and W. van Westrenen, Significant depletion of volatile elements in the mantle of asteroid Vesta due to core formation, *Icarus* 317, 669-681, 2019.
- Steenstra, E. S., A. X. Seegers, R. Putter, J. Berndt, S. Klemme, S. Matveev, E. S. Bullock, and W. van Westrenen, Metal-silicate partitioning systematics of siderophile elements at reducing conditions: a new experimental database, *Icarus*, in press.
- Steenstra, E. S., V. T. Trautner, J. Berndt, S. Klemme, and W. van Westrenen, Trace element partitioning between sulfide-, metal- and silicate melts at highly reduced conditions: insights into the distribution of volatile elements during core formation in reduced bodies, *Icarus*, in press.
- 5680 Steenstra, E. S., and W. van Westrenen, A synthesis of geochemical constraints on the inventory of light elements in the core of Mars, *Icarus* 315, 69-78, 2018.
- 5677 Tamerius, A. D., S. M. Clarke, M. Gu, J. P. S. Walsh, M. Esters, Y. Meng, C. H. Hendon, J. M. Rondinelli, S. D. Jacobsen, and D. E. Freedman, Discovery of Cu<sub>3</sub>Pb, *Angew. Chem. Int. Ed.* 57, 12809-12813, 2018.

- 5705 Tang, H., B. Wan, B. Gao, Y. Muraba, Q. Qin, B. Yan, P. Chen, Q. Hu, D. Zhang, L. Wu, M. Wang, H. Xiao, H. Gou, F. Gao, H. K. Mao, and H. Hosono, Metal-to-semiconductor transition and electronic dimensionality reduction of  $\text{Ca}_2\text{N}$  electride under pressure, *Adv. Sci.* **5**, 1800666, 2018.
- 5777 Terasaki, H., K. Nishida, S. Urakawa, Y. Takubo, S. Kuwabara, Y. Shimoyama, K. Uesugi, Y. Kono, A. Takeuchi, Y. Suzuki, Y. Higo, and T. Kondo, Sound velocity and density of liquid  $\text{Ni}_{68}\text{S}_{32}$  under pressure using ultrasonic and X-ray absorption with tomography methods, *Comptes Rendus Geosci.* **351**, 163-170, 2019.
- 5701 Turnbull, R., M.-E. Donnelly, M. Wang, M. Peña-Alvarez, C. Ji, P. Dalladay-Simpson, H. K. Mao, E. Gregoryanz, and R. T. Howie, Reactivity of hydrogen-helium and hydrogen-nitrogen mixtures at high pressures, *Phys. Rev. Lett.* **121**, 195702, 2018.
- 5761 Vadapoo, R., M. Ahart, M. Staruch, M. Guerette, J. Luo, P. Finkel, and R. E. Cohen, Effect of aging and Mn substitution on anisotropy of third generation piezoelectrics, *Ferroelectrics* **535**, 120-127, 2018.
- 5817 Vats, G., Ravikant, S. Kumari, D. K. Pradhan, R. S. Katiyar, V. N. Ojha, C. R. Bowen, and A. Kumar, Magnetocaloric effect and piezoresponse of engineered ferroelectric-ferromagnetic heterostructures, *J. Magn. Magn. Mater.* **473**, 511-516, 2019.
- 5719 Wan, B., Y. Lu, Z. Xiao, Y. Muraba, J. Kim, D. Huang, L. Wu, H. Gou, J. Zhang, F. Gao, H. K. Mao, and H. Hosono, Identifying quasi-2D and 1D electrides in yttrium and scandium chlorides via geometrical identification, *NPJ Comput. Mater.* **4**, 77, 2018.
- 5801 Wang, Q., H. Gou, L. Zhu, H.-T. Huang, A. Biswas, B. L. Chaloux, A. Epshteyn, J. P. Yesinowski, Z. Liu, G. Cody, M. Ma, Z. Zhao, Y. Fei, C. Prescher, E. Greenberg, V. B. Prakapenka, and T. A. Strobel, Modifying carbon nitride through extreme phosphorus substitution, *ACS Mater. Lett.* **1**, 14-19, 2019.
- 5798 Wang, W., M. J. Walter, Y. Peng, S. Redfern, and Z. Wu, Constraining olivine abundance and water content of the mantle at the 410-km discontinuity from the elasticity of olivine and wadsleyite, *Earth Planet. Sci. Lett.* **519**, 1-11, 2019.
- 5802 Wang, X., P. Zhang, X. Tang, J. Guan, X. Lin, Y. Wang, X. Dong, B. Yue, J. Yan, K. Li, H. Zheng, and H. K. Mao, Structure and electrical performance of  $\text{Na}_2\text{C}_6\text{O}_6$  under high pressure, *J. Phys. Chem. C* **123**, 17163-17169, 2019.
- 5749 Wang, Y., X. Dong, X. Tang, H. Zheng, K. Li, X. Lin, L. Fang, G. Sun, X. Chen, L. Xie, C. L. Bull, N. P. Funnell, T. Hattori, A. Sano-Furukawa, J. Chen, D. K. Hensley, G. D. Cody, Y. Ren, H. H. Lee, and H. K. Mao, Pressure-induced Diels-Alder reactions in  $\text{C}_6\text{H}_6$ - $\text{C}_6\text{F}_6$  cocrystal towards graphane structure, *Angew. Chem. Int. Ed.* **58**, 1468-1473, 2019.

- 5764 Wang, Y., X. Zhang, S. Jiang, Z. M. Geballe, T. Pakornchote, M. Somayazulu, V. B. Prakapenka, E. Greenberg, and A. F. Goncharov, Helium-hydrogen immiscibility at high pressures, *J. Chem. Phys.* **150**, 114504, 2019.
- 5778 Ward, M. D., H.-T. Huang, L. Zhu, D. Popov, and T. A. Strobel, High-pressure behavior of C<sub>2</sub>I<sub>2</sub> and polymerization to a conductive polymer, *J. Phys. Chem. C* **123**, 11369-11377, 2019.
- Ward, M., W. S. Tang, L. Zhu, D. Popov, G. Cody, and T. Strobel, Controlled single-crystalline polymerization of C<sub>10</sub>H<sub>8</sub>-C<sub>10</sub>F<sub>8</sub> under pressure, *Macromolecules*, in press.
- 5815 Werellapatha, K., C. A. Escanhoela, Jr., G. Fabbris, D. Haskel, A. Ankudinov, and P. Chow, Evolution of electronic and magnetic properties of nominal magnetite nanoparticles at high pressure probed by x-ray absorption and emission techniques, *J. Phys.: Condens. Matter* **31**, 255301, 2019.
- 5678 Wu, Y., H. Liu, H. Huang, Y. Fei, X. Feng, and S. A. T. Redfern, Pressure-induced structural modulations in coesite, *Phys. Rev. B* **98**, 104106, 2018.
- 5757 Xu, R., S. Liu, S. Saremi, R. Gao, J. J. Wang, Z. Hong, H. Lu, A. Ghosh, S. Pandyal, E. Bonturim, Z. H. Chen, L. Q. Chen, A. M. Rappe, and L. W. Martin, Kinetic control of tunable multi-state switching in ferroelectric thin films, *Nature Commun.* **10**, 1282, 2019.
- Yaxley, G. M., S. Ghosh, E. S. Kiseeva, A. Mallik, C. Spandler, A. R. Thomson, and M. J. Walter, CO<sub>2</sub>-rich melts in Earth, in *Deep Carbon: Past to Present*, B. N. Orcutt, I. Danielle, and R. Dasgupta, eds., Cambridge University Press, in press.
- 5714 Ye, Y., S.-H. Shim, V. Prakapenka, and Y. Meng, Equation of state of solid Ne intercalibrated with the MgO, Au, Pt, NaCl-B<sub>2</sub>, and ruby pressure scales up to 130 GPa, *High Pressure Res.* **38**, 377-395, 2018.
- 5792 Ying, J., X. Li, E. Greenberg, V. V. Prakapenka, H. Liu, and V. V. Struzhkin, Synthesis and stability of tantalum hydride at high pressures, *Phys. Rev. B* **99**, 224504, 2019.
- 5667 Ying, J., H. Liu, E. Greenberg, V. B. Prakapenka, and V. V. Struzhkin, Synthesis of new nickel hydrides at high pressure, *Phys. Rev. Mater.* **2**, 085409, 2018.
- 5759 Young, E. D., A. Shahar, F. Nimmo, H. E. Schlichting, E. A. Schauble, H. Tang, and J. Labidi, Near-equilibrium isotope fractionation during planetesimal evaporation, *Icarus* **323**, 1-15, 2019.
- 5758 Zhai, S., H. Yang, W. Xue, E. Huang, D. Yamazaki, S. M. Morrison, and R. T. Downs, Crystal chemistry of Eu-bearing tuite synthesized at high-pressure and high-temperature conditions, *Phys. Chem. Minerals* **46**, 157-163, 2019.

- 5774 Zhang, B., Q. Zeng, R. Kou, L. Yang, H. Lou, S. M. Heald, J. Chen, Y. Ding, C.-J. Sun, and G. M. Chow, Investigation of non-local screening in *K*-edge XANES for  $\text{Pr}_{0.67}\text{Sr}_{0.33}\text{MnO}_3$  under high pressure, *J. Alloys Compounds* 792, 108-115, 2019.
- 5671 Zhang, F., S. Xiao, B. Kendall, S. J. Romaniello, H. Cui, M. Meyer, G. J. Gilleaudeau, A. J. Kaufman, and A. D. Anbar, Extensive marine anoxia during the terminal Ediacaran Period, *Sci. Adv.* 4, eaan8983, 2018.
- 5734 Zhang, H., Q. Li, F. Wang, R. Liu, Y. Mao, Z. Liu, X. Li, K. Yang, T. Cui, and B. Liu, Pressure-induced reversible phase transitions in a new metastable phase of vanadium dioxide, *J. Phys. Chem. C* 123, 955-962, 2019.
- 5748 Zhang, H., B. Y. Yavorsky, and R. E. Cohen, Polar metallocenes, *Molecules* 24, 486, 2019.
- 5793 Zhang, L., H. Yuan, Y. Meng, and H. K. Mao, Development of high-pressure multigrain X-ray diffraction for exploring the Earth's interior, *Engineering* 5, 441-447, 2019.
- 5674 Zhang, X., W. Xu, Y. Wang, S. Jiang, F. A. Gorelli, E. Greenberg, V. B. Prakapenka, and A. F. Goncharov, Reply to "Comment on 'Synthesis and properties of selenium trihydride at high pressures'", *Phys. Rev. B* 98, 106102, 2018.
- 5737 Zhao, X.-M., H.-Y. Liu, A. F. Goncharov, Z.-W. Zhao, V. V. Struzhkin, H. K. Mao, A. G. Gavriliuk, and X.-J. Chen, Pressure effect on the electronic, structural, and vibrational properties of layered  $2H\text{-MoTe}_2$ , *Phys. Rev. B* 99, 024111, 2019.
- 5700 Zhao, Y., W. Yang, H. S. Schnyders, A. Husmann, G. Zhang, Y. Ren, D. L. Price, H. K. Mao, and M.-L. Saboungi, Pressure-induced charge density wave phase in  $\text{Ag}_{2-\delta}\text{Te}$ , *Phys. Rev. B* 98, 205126, 2018.
- 5729 Zhou, J., L. Hou, J. Lian, W. Cheng, D. Wang, H. Gou, and F. Gao, Nitrogen-doped highly dense but porous carbon microspheres with ultrahigh volumetric capacitance and rate capability for supercapacitors, *J. Mater. Chem. A* 7, 476-485, 2019.
- 5707 Zhou, X., J. Zhong, J. Dong, L. Kong, G. Liu, and Y. Tang, The BL01B1 infrared beamline at Shanghai Synchrotron Radiation Facility, *Infrared Phys. Technol.* 94, 250-254, 2018.
- 5824 Zhu, L., R. E. Cohen, and T. A. Strobel, Phase transition pathway sampling via swarm intelligence and graph theory, *J. Phys. Chem. Lett.* 10, 5019-5024, 2019.
- 5779 Zhu, S.-C., J. Liu, Q. Hu, W. D. L. Mao, Y. Meng, D. Zhang, H. K. Mao, and Q. Zhu, Structure-controlled oxygen concentration in  $\text{Fe}_2\text{O}_3$  and  $\text{FeO}_2$ , *Inorg. Chem.* 58, 5476-5482, 2019.

**Global Ecology**  
**Bibliography 2018 – 2019**

---

Albright, R., Takeshita, Y., Koweek, D. A., Ninokawa, A., Wolfe, K., Rivlin, T., Caldeira, K. 2018: Carbon dioxide addition to coral reef waters suppresses net community calcification. *Nature*, 555, 516–519.

Ambrose, A.R., W.L. Baxter, R.E. Martin, E. Francis, G.P. Asner, K.R. Nydick, and T.E. Dawson. 2018: Leaf- and crown-level adjustments help giant sequoias maintain favorable water status during severe drought. *Forest Ecology and Management* 419-420:257-267.

Anderson CZ, CWW Abney, A Adams, MS Adams. 2018: Salted Paper Printing: A Step-by-Step Manual Highlighting Contemporary. *Agar in Emulsion Making*.

Asner, G., Martin, R., Keith, L., Heller, W., Hughes, M., Vaughn, N., ... Balzotti, C. 2018: A Spectral Mapping Signature for the Rapid Ohia Death (ROD) Pathogen in Hawaiian Forests. *Remote Sensing*, 10(3), 404. <https://doi.org/10.3390/rs10030404>

Asner, G.P., P.G. Brodrick, C. Philipson, N.R. Vaughn, R.E. Martin, D.E. Knapp, J. Heckler, L.J. Evans, T. Jucker, B. Goossens, D.J. Stark, G. Reynolds, R. Ong, N. Renneboog, F. Kugan, and D.A. Coomes. 2017. Mapped aboveground carbon stocks to advance forest conservation and recovery in Malaysian Borneo. *Biological Conservation* 217:289-310.

Badgley G, Anderegg LDL, Berry JA, Field CB. 2019: Terrestrial Gross Primary Production: Using NIR<sub>v</sub> to Scale from Site to Globe. *Global change biology*.

Badgley G, LD Anderegg, JA Berry, CB Field. 2018: An ecologically based approach to terrestrial primary production. *AGU Fall Meeting Abstracts*.

Ballard, T.C., A.M. Michalak, G.F. McIsaac, N.N. Rabalais, R.E. Turner. 2019: Comment on 'Legacy nitrogen may prevent achievement of water quality goals in the Gulf of Mexico', *Science*, 365 (6455), doi:10.1126/science.aau840.

Ballard, T.C., E. Sinha, A.M. Michalak. 2019: Long-Term Changes in Precipitation and Temperature Have Already Impacted Nitrogen Loading, *Environmental Science and Technology*, 53, 5080-5090, doi:10.1021/acs.est.8b06898.

Berry JA, Grayson B, Johnson J, Zeng Y, Anderegg LD, Ryu Y. 2018: O<sub>2</sub> as AN Alternative to CO<sub>2</sub> for Analyzing Global Photosynthesis. *AGU Fall Meeting Abstracts*.

Berry JA, AE Hall, VI Adolf, SE Jacobsen, S Shabala, AA Agrawal, C Laforsch. 2018: Irrigation management methods for reducing water use of cowpea (*Vigna unguiculata* [L.] Walp.) and lima beans (*Phaseolus lunatus* L.) While maintaining seed...*Crop Responses to Environment: Adapting to Global Climate Change* 92 (11–12 ...

Berry JA. 2018: 3.10 Solar Induced Chlorophyll Fluorescence: Origins, Relation to Photosynthesis and Retrieval.

Blonder, B., N. Salinas, L. Patrick Bentley, A. Shenkin, P.O. Chambi Porroa, Y. Valdez Tejeira, T.E. Boza Espinoza, G.R. Goldsmith, L. Enrico, R. Martin, G.P. Asner, S. Diaz, B.J. Enquist, and Y. Malhi. 2018: Structural and defensive roles of angiosperm leaf venation network reticulation across an Andes-Amazon elevation gradient. *Journal of Ecology* doi:10.1111/1365-2745.12945

Bouvet, A., S. Mermoz, T. Le Toan, L. Villard, R. Mathieu, L. Naidoo, and G.P. Asner. 2018: An above-ground biomass map of African savannahs and woodlands at 25 m resolution derived from ALOS PALSAR. *Remote Sensing of Environment* 206:156-173.

Caldeira K., Brown, P.T. 2019: Reduced emissions through climate damage to the economy. *Proceedings of the National Academy of Sciences* 116(3): 714-716

Casey, G., Shayegh, S., Moreno-Cruz, J., Bunzl, M., Galor, O., Caldeira, K. 2019: The impact of climate change on fertility. *Environmental Research Letters*, 14(5), 054007.  
<https://doi.org/10.1088/1748-9326/ab0843>

Chadwick, K.D., and G.P. Asner. 2018: Landscape evolution and nutrient rejuvenation reflected in Amazon forest canopy chemistry. *Ecology Letters* doi:10.1111/ele.12963

Cui, E., K. Huang, M.A. Arain, J.B. Fisher, D.N. Huntzinger, A. Ito, Y. Luo, A.K. Jain, J. Mao, A.M. Michalak, S. Niu, N.C. Parazoo, C. Peng, S. Peng, B. Poulter, D.M. Ricciuto, K.M. Schaefer,

C.R. Schwalm, X. Shi, H. Tian, W. Wang, J. Wang, Y. Wei, E. Yan, L. Yan, N. Zeng, Q. Zhu, J. Xia. 2019: Vegetation Functional Properties Determine Uncertainty of Simulated Ecosystem Productivity: A Traceability Analysis in the East Asian Monsoon Region, *Global Biogeochemical Cycles*, 33, doi:10.1029/2018GB005909.

Cyronak, T., Andersson AJ. Langdon, C., Albright, R., Bates, N. R., Caldeira, K., Carlton, R., ... Yamamoto, S. 2018: Taking the metabolic pulse of the world's coral reefs. *PLoS ONE*, 13, 1.

Davies, A.B., A. Gaylard, and G.P. Asner. 2018: Megafaunal effects on vegetation structure throughout a densely wooded African landscape. *Ecological Applications* doi:10.1002.eap.1655

Davis, S. J., Lewis, N. S., Shaner, M., Aggarwal, S., Arent, D., Azevedo, I. L., ... Caldeira, K. 2018: Net-zero emissions energy systems. *Science*, 360, 6396.

Dechant B, Ryu Y, Badgley G, Zeng Y, Berry JA, Zhang Y, Goulas Y, Li Z. 2019: Canopy structure explains the relationship between photosynthesis and sun-induced chlorophyll fluorescence in crops. *EarthArXiv*.

Del Giudice, D., R.L. Muenich, M.M. Kalcic, N.S. Bosch, D. Scavia, A.M. Michalak. 2018: the practical usefulness of least squares for assessing uncertainty in hydrologic and water quality predictions, *Environmental Modelling & Software*, 105, 286-295, doi:10.1016/j.envsoft.2018.03.009.

Del Giudice, D., Y. Zhou, E. Sinha, A.M. Michalak. 2018: Long-Term phosphorus loading and springtime temperatures explain interannual variability of hypoxia in a large temperate lake, *Environmental Science & Technology*, 52(4) 2046-2054, 10.1021/acs.est.7b04730.

Duan, L., Cao, L., & Caldeira, K. 2019: Estimating Contributions of Sea Ice and Land Snow to Climate Feedback. *Journal of Geophysical Research: Atmospheres*, 124(1), 199–208. <https://doi.org/10.1029/2018JD029093>

Duan, L., Cao, L., Bala, G., & Caldeira, K. 2019: Climate Response to Pulse Versus Sustained Stratospheric Aerosol Forcing. *Geophysical Research Letters* <https://doi.org/10.1029/2019GL083701>

Evans, L.J., G.P. Asner, and B. Goossens. 2018: Protected area management priorities crucial for the future of Bornean elephants. *Biological Conservation* doi:10.1016/j.biocon.2018.03.015

Franks PJ, GB Bonan, JA Berry, DL Lombardozzi, NM Holbrook, N Herold. 2018: Comparing optimal and empirical stomatal conductance models for application in Earth system models. *Global change biology* 24 (12), 5708-5723.

Gamon JA, Suyker A, Walter-Shea EA, Arkebauer TJ, Zygielbaum AI. 2018: The Nebraska SIF Campaign-a Multi-Scale Field Experiment. *AGU Fall Meeting Abstracts*.

Hu, L., A.E. Andrews, K.W. Thoning, C. Sweeney, J.B. Miller, A.M. Michalak, E. Dlugokencky, P.P. Tans, Y.P. Shiga, M. Mountain, T. Nehrkorn, S.A. Montzka, K. McKain, J. Kofler, M. Trudeau, S.E. Michel, S.C. Biraud, M.L. Fischer, D.E.J. Worthy, B.H. Vaughn, J.W.C. White, V. Yadav, S. Basu, I.R. van der Velde. 2019: Enhanced North American carbon uptake associated with El Nino, *Science Advances*, 5 (6), doi:10.1126/sciadv.aaw0076.

Huang K., J. Xia, Y. Wang, A. Ahlstrom, J. Chen, R.B. Cook, E. Cui, Y. Fang, J.B. Fisher, D.N. Huntzinger, Z. Li, A.M. Michalak, Y. Qiao, K. Schaefer, C. Schwalm, J. Wang, Y. Wei, X. Xu, L. Yan, C. Bian, Y. 2018: Enhanced peak growth of global vegetation and its key mechanisms, *Nature Ecology & Evolution*, 2, 1897-1905, doi:10.1038/s41559-018-0714-0.

Huang M, Piao S, Ciais P, Peñuelas J, Wang X, Keenan TF, Peng S. 2019: Air temperature optima of vegetation productivity across global biomes. *Nature ecology & evolution* 3 (5), 772.

Hughes, R.F., G.P. Asner, J.A. Baldwin, J. Mascaró, L.K.K. Bufile, and D.E. Knapp. 2018: Estimating aboveground carbon density across forest landscapes of Hawaii: combining FIA plot- derived estimates and airborne LiDAR. *Forest Ecology and Management* 424:323-337.

Jeong, S, A.A. Bloom, D. Schimel, C. Sweeney, N.C. Parazoo, D. Medvigy, G. Schaepman-Strub, C. Zheng, C.R. Schwalm, D.N. Huntzinger, A.M. Michalak, C.E. Miller. 2018: Accelerating rates of Arctic carbon cycling revealed by long-term atmospheric CO<sub>2</sub> measurements, *Science Advances*, 4 (7), doi:10.1126/sciadv.aao1167.

Kolus, H.R., D.N. Huntzinger, C.R. Schwalm, J.B. Fisher, N. McKay, Y. Fang, A.M. Michalak, K. Schaefer, Y. Wei, B. Poulter, J. Mao, N.C. Parazoo, X. Shi. 2019: Land carbon models



underestimate the severity and duration of drought's impact on plant productivity, *Scientific Reports*, 9 (2758), doi:10.1038/s41598-019-39373-1.

Koweek, D. A., Forden, A., Albright, R., Takeshita, Y., Mucciarone, D. A., Ninokawa, A., & Caldeira, K. 2019: Carbon Isotopic Fractionation in Organic Matter Production Consistent with Benthic Community Composition Across a Coral Reef Flat. *Frontiers in Marine Science*, 5, 520. <https://doi.org/10.3389/fmars.2018.00520>

Koweek, D., Zimmerman, R. C., Hewett, K. M., Gaylord, B., Siddings, S. N., Nickols, K. J., ... Caldeira, K. 2018: Expected limits on the ocean acidification buffering potential of a temperate seagrass meadow. *Ecological Applications*, 28(7), 1694–1714.

Li, C., Y. Fang, K. Caldeira, X. Zhang, N.S. Diffenbaugh, A.M. Michalak. 2018: Widespread persistent changes to temperature extremes occurred earlier than predicted, *Scientific Reports*, 8 (1007), doi:10.1038/s41598-018-19288-z.

Liu YY, AIJM van Dijk, DG Miralles, MF McCabe, JP Evans, RAM de Jeu. 2018: Enhanced canopy growth precedes senescence in 2005 and 2010 Amazonian droughts. *Remote sensing of environment* 211, 26-37.

Liu, Y., S. Piao, T. Gasser, P. Ciais, H. Yang, H. Wang, T.F. Keenan, M. Huang, S. Wan, J. Song, K. Wang, I.A. Janssens, J. Penuelas, C. Huntingford, X. Wang, M.A. Arain, Y. Fang, J.B. Fisher, M. Huang, D.N. Huntzinger, A. Ito, A.K. Jain, J. Mao, A.M. Michalak, C. Peng, B. Poulter, C. Schwalm, X. Shi, H. Tian, Y. Wei, N. Zeng, Q. Zhu, T. Wang. 2019: Field-experiment constraints on the enhancement of the terrestrial carbon sink by CO<sub>2</sub> fertilization, *Nature Geoscience*, doi:10.1038/s41561-019-0436-1.

Martin, R., Chadwick, K., Brodrick, P., Carranza-Jimenez, L., Vaughn, N., & Asner, G. 2018: An Approach for Foliar Trait Retrieval from Airborne Imaging Spectroscopy of Tropical Forests. *Remote Sensing*, 10(2), 199. <https://doi.org/10.3390/rs10020199>

Martin, R.E., G.P. Asner, E. Francis, A. Ambrose, W. Baxter, A.J. Das, N.R. Vaughn, T. Paz-Kagan, T. Dawson, K. Nydick, and N.L. Stephenson. 2018: Remote measurement of canopy water content in giant sequoias (*Sequoiadendron giganteum*) during drought. *Forest Ecology and Management* 419-420:279-290.

McManus Chauvin, K., G.P. Asner, R.E. Martin, W.J. Kress, S.J. Wright, and C.B. Field. 2018: Decoupled dimensions of leaf economic and anti-herbivore defense strategies in a tropical canopy tree community. *Oecologia* doi:10.1007/s00442-017-4043-9.

Meredith LK, Ogée J, Boye K, Singer E, Wingate L, von Sperber C. 2019: Soil exchange rates of COS and CO<sub>18</sub>O differ with the diversity of microbial communities and their carbonic anhydrase enzymes. *The ISME Journal*, 13 (2), 290.

Miller, S.M., A.M. Michalak, R.G. Detmers, O.P. Hasekamp, L.M.P. Bruhwiler, S. Schwietzke. 2019: China's coal mine methane regulations have not curbed growing emissions, *Nature Communications*, 10 (303), doi:10.1038/s41467-018-07891.

Miller, S.M., A.M. Michalak, V. Yadav, J.M. Tadić. 2018: Characterizing biospheric carbon balance using CO<sub>2</sub> observations from the OCO-2 satellite, *Atmospheric Chemistry and Physics*, 18 (9), 6785-6799, doi:10.5194/acp-18-6785-2018.

Modak, A., G. Bala, G., Caldeira, K., & Cao, L. 2018: Does shortwave absorption by methane influence its effectiveness? *Clim Dyn*, 51(9–10), 3653–3672.

Mohammed GH, Colombo R, Middleton EM, Rascher U, van der Tol C. 2019: Remote sensing of solar-induced chlorophyll fluorescence (SIF) in vegetation: 50 years of progress. *Remote Sensing of Environment*, 231, 111177.

Niemiec, R.M., G.P. Asner, P.G. Brodrick, J.A. Gaertner, N.M. Ardoin. 2018: Scale-dependence of environmental and socioeconomic drivers of Albizia invasion in Hawaii. *Landscape and Urban Planning* 169:70-80.

Nydick, K.R., N.L. Stephenson, A.R. Ambrose, G.P. Asner, W.L. Baxter, A.J. Das, T. Dawson, R.E. Martin, and T. Paz-Kagan. 2018: Leaf to landscape responses of giant sequoia to hotter drought: An introduction and synthesis for the special section. *Forest Ecology and Management* 419-420:249-256.

Paz-Kagan, T., N.R. Vaughn, R.E. Martin, P.G. Brodrick, N.L. Stephenson, A.J. Das, K.R. Nydick, and G.P. Asner. 2018: Landscape-scale variation in canopy water content of giant sequoias during drought. *Forest Ecology and Management* 419-420:291-304.

Persad, G., & Caldeira, K. 2018: Divergent global-scale temperature effects from identical aerosols. 26 August 2019 2 Ken Caldeira

Possner, A., Wang, H., Wood, R., Caldeira, K., & TP, A. 2018: The efficacy of aerosol-cloud radiative perturbations from near-surface emissions in deep open-cell stratocumuli. *Atmospheric Chemistry and Physics*, 18(23), 17475–17488.

Praetorius, S., Rugenstein, M., Persad, G., & Caldeira, K. 2018: Global and Arctic climate sensitivity enhanced by changes in North Pacific heat flux. *Nature Communications*, 9, 3124.

Qiu B, Y Xue, JB Fisher, W Guo, JA Berry, Y Zhang. 2018: Satellite Chlorophyll Fluorescence and Soil Moisture Observations Lead to Advances in the Predictive Understanding of Global Terrestrial Coupled Carbon-Water Cycles. *Global Biogeochemical Cycles* 32 (3), 360-375.

Rampino, M., & Caldeira, K. 2018: Comparison of the ages of large-body impacts, flood-basalt eruptions, ocean-anoxic events and extinctions over the last 26 million years: a statistical study. *International Journal of Earth Sciences*, 107(2), 601–606.

Ricke, K., Drouet, L., Caldeira, K., & Tanoni, M. 2018: Country-level social cost of carbon. *Nature Climate Change*, 8(10), 895–900.

Romano de Orte, MR., Clowez, S., & Caldeira, K. 2019: Response of bleached and symbiotic sea anemones to plastic microfiber exposure. *Environmental Pollution*, 249, 512-517.  
<https://doi.org/10.1016/j.envpol.2019.02.100>

Ryoo, J., L.T. Iraci, T. Tanaka, J.E. Marrero, E.L. Yates, I. Fung, A.M. Michalak, J. Tadic, W. Gore, T.P. Bui, J.M. Dean-Day, C.S. Chang. 2019: Quantification of CO<sub>2</sub> and CH<sub>4</sub> emissions over Sacramento, California, based on divergence theorem using aircraft measurements, *Atmospheric Measurement Techniques*, 12, 2949-2966, doi:10.5194/amt-12- 2949-2019

Ryu Y, Berry JA, Baldocchi, DD. 2019: What is global photosynthesis? History, uncertainties and opportunities. *Remote sensing of environment* 223, 95-114.

Ryu Y, Dechant B, Yang K, Berry JA, Kim H, Kang M, Zeng Y, Kornfeld A. 2018: Sun-induced chlorophyll fluorescence as a better proxy of absorbed light than canopy photosynthesis in a rice paddy. *AGU Fall Meeting Abstracts*.

Shaner, M. R., Davis, S. J., Lewis, N. S., & Caldeira, K. 2018: Geophysical constraints on the reliability of solar and wind power in the United States. *Energy and Environmental Science*, 11, 914–925.

Shiga YP, Berry JA, Anderegg LD, Andrews AE, Grayson B, Baier B. 2018: Developing a Regional-scale Photosynthetic Carbon Flux Estimation Framework using Atmospheric Carbonyl Sulfide Measurements and a Geostatistical Inverse Modeling Approach. *AGU Fall Meeting Abstracts*.

Shiga, Y.P., A.M. Michalak, Y. Fang, K. Schaefer, A.E. Andrews, D.H. Huntzinger, C.R. Schwalm, K. Thoning, Y. Wei. 2018: Forests dominate the interannual variability of the North American carbon sink, *Environmental Research Letters*, 084015, doi:10.1088/1748-9326/aad505.

Shiga, Y.P., J.M. Tadić, X. Qiu, V. Yadav, A.E. Andrews, J.A. Berry, A.M. Michalak. 2018: Atmospheric CO<sub>2</sub> observations reveal strong correlation between regional net biospheric carbon uptake and solar-induced chlorophyll fluorescence, *Geophysical Research Letters* 45 (2), 1122-1132, doi:10.1002/2017GL076630.

Sinha, E., A.M. Michalak, K.V. Calvin, P.J. Lawrence. 2019: Societal decisions about climate mitigation will have dramatic impacts on eutrophication in the 21st century, *Nature Communications*, 10 (939), doi:10.1038/s41467-019-08884-w.

Tong, D., Zhang, Q., Zheng, Y., Caldeira, K., Shearer, C., Hong, C., Qin, Y., & Davis, S.J. 2019: Committed emissions from existing energy infrastructure jeopardize 1.5° C climate target. *Nature*. 1476-4687. <https://doi.org/10.1038/s41586-019-1364-3>

Tonolo F, Salmain M, Scalcon V, Top S, Pigeon P, Folda A, Caron B. 2019: Small Structural Differences between Two Ferrocenyl Diphenols Determine Large Discrepancies of Reactivity and Biological Effects, *ChemMedChem*.

Touma D., A.M. Michalak, D.L. Swain, N.S. Diffenbaugh 2018: Characterizing the Spatial Scales of Extreme Daily Precipitation in the United States, *Journal of Climate*, 31, 8023-8037, doi:10.1175/JCLI-D-18-0019.1.

Vaughn, N., Asner, G., Brodrick, P., Martin, R., Heckler, J., Knapp, D., & Hughes, R 2018: An Approach for High-Resolution Mapping of Hawaiian *Metrosideros* Forest Mortality Using Laser-Guided Imaging Spectroscopy. *Remote Sensing*, 10(4), 502, doi:10.3390/rs10040502. <https://doi.org/10.3390/rs10040502>

Veenendaal, E.M. M. Torello-Raventos, H.S. Miranda, N.M. Sato, I. Oliveras, F. van Langevelde, G.P. Asner, and J. Lloyd. 2018: On the relationship between fire regime and vegetation structure in the tropics. *New Phytologist* doi:10.1111/nph.14940.

Wang, R., Saunders, H., Moreno-Cruz, J., & Caldeira, K. 2019: Induced Energy-Saving Efficiency Improvements Amplify Effectiveness of Climate Change Mitigation. *Joule* 3, 1-17, <https://doi.org/10.1016/j.joule.2019.07.024>

Whelan ME, ST Lennartz, TE Gimeno, R Wehr, G Wohlfahrt, Y Wang. 2018: Reviews and syntheses: Carbonyl sulfide as a multi-scale tracer for carbon and water cycles. *Biogeosciences* 15 (12), 3625-3657.

Yang K, Y Ryu, B Dechant, JA Berry, Y Hwang, C Jiang, M Kang, J Kim. 2018: Sun-induced chlorophyll fluorescence is more strongly related to absorbed light than to photosynthesis at half-hourly resolution in a rice paddy. *Remote Sensing of Environment* 216, 658-673.

Zeng Y, Badgley G, Dechant B, Ryu Y, Chen M, Berry JA. 2019: A practical approach for estimating the escape ratio of near-infrared solar-induced chlorophyll fluorescence. *Remote Sensing of Environment* 232, 111209.

Zeng Y, Grayson B, Berry JA. 2018: Generation of canopy structure and fluorescence products by the combined use of DSCOVR/EPIC and TROPOMI observations. *AGU Fall Meeting Abstracts*.

## Observatories Bibliography 2018-2019

---

Aadland, E., Massey, P., Neugent, K. F., Drout, M. R., Shedding Light on the Isolation of Luminous Blue Variables, *AJ*, 156, 294, 2018.

<https://ui.adsabs.harvard.edu/abs/2018AJ....156..294A>

Abbott, T. M. C., Abdalla, F. B., Alarcon, A., .... Bernstein, R. A., et al., Dark Energy Survey Year 1 Results: Measurement of the Baryon Acoustic Oscillation scale in the distribution of galaxies to redshift 1, *MNRAS*, 483, 4866-4883, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.483.4866A>

Abbott, T. M. C., Abdalla, F. B., Annis, J., .... Bernstein, R. A., et al., Dark Energy Survey Collaboration, South Pole Telescope Collaboration, Dark Energy Survey Year 1 Results: A Precise  $H_0$  Estimate from DES Y1, BAO, and D/H Data, *MNRAS*, 480, 3879-3888, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.480.3879A>

Abbott, T. M. C., Alarcon, A., Allam, S., .... Uddin, S. A., et al., DES Collaboration, Cosmological Constraints from Multiple Probes in the Dark Energy Survey, *PhRvL*, 122, 171301, 2019.

<https://ui.adsabs.harvard.edu/abs/2019PhRvL.122q1301A>

Abbott, T. M. C., Allam, S., Andersen, P., .... Uddin, S. A., et al., DES Collaboration, First Cosmology Results using Type Ia Supernovae from the Dark Energy Survey: Constraints on Cosmological Parameters, *ApJL*, 872, L30, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...872L..30A>

Abramson, L. E., Newman, A. B., Treu, T., .... Dressler, A., et al., The Grism Lens-amplified Survey from Space (GLASS). XII. Spatially Resolved Galaxy Star Formation Histories and True Evolutionary Paths at  $z > 1$ , *AJ*, 156, 29, 2018.

<https://ui.adsabs.harvard.edu/abs/2018AJ....156...29A>

Acero, M. A., Adamson, P., Aliaga, L., .... Bernstein, R., et al., NOvA Collaboration, Observation of seasonal variation of atmospheric multiple-muon events in the NOvA Near Detector, *PhRvD*, *99*, 122004, 2019.

<https://ui.adsabs.harvard.edu/abs/2019PhRvD..99l2004A>

Acero, M. A., Adamson, P., Aliaga, L., .... Bernstein, R., et al., NOvA Collaboration, New constraints on oscillation parameters from  $\nu_e$  appearance and  $\nu_\mu$  disappearance in the NOvA experiment, *PhRvD*, *98*, 032012, 2018.

<https://ui.adsabs.harvard.edu/abs/2018PhRvD..98c2012A>

Agnello, A., Lin, H., Kuropatkin, N., .... Bernstein, R. A., et al., DES meets Gaia: discovery of strongly lensed quasars from a multiplet search, *MNRAS*, *479*, 4345-4354, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.479.4345A>

Aguado, D. S., Ahumada, R., Almeida, A., .... Beaton, R. L., .... Blanc, G. A., .... Kollmeier, J., et al., The Fifteenth Data Release of the Sloan Digital Sky Surveys: First Release of MaNGA-derived Quantities, Data Visualization Tools, and Stellar Library, *ApJS*, *240*, 23, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJS..240...23A>

Ahumada, J. A., Arellano Ferro, A., Bustos Fierro, I. H., Calderón, J. H., Morrell, N., La población de estrellas variables de NGC 6362, *BAAA*, *60*, 246-248, 2018.

<https://ui.adsabs.harvard.edu/abs/2018BAAA...60..246A>

Anderson, J. P., Pessi, P. J., Dessart, L., .... Morrell, N., .... Phillips, M. M., et al., A nearby super-luminous supernova with a long pre-maximum & "plateau" and strong C II features, *A&A*, *620*, A67, 2018.

<https://ui.adsabs.harvard.edu/abs/2018A&A...620A..67A>

Andreoni, I., Anand, S., Bianco, F. B., .... Cowperthwaite, P. S., .... Drout, M., et al., LSST Transient, with the support of the Variable Stars Collaboration, A Strategy for LSST to Unveil a Population of Kilonovae without Gravitational-wave Triggers, *PASP*, *131*, 068004, 2019.

<https://ui.adsabs.harvard.edu/abs/2019PASP..131f8004A>

Anguiano, B., Majewski, S. R., Allende-Prieto, C., .... Beaton, R. L., et al., Comprehensive comparison between APOGEE and LAMOST. Radial velocities and atmospheric stellar parameters, *A&A*, 620, A76, 2018.

<https://ui.adsabs.harvard.edu/abs/2018A&A...620A..76A>

Anguita, T., Schechter, P. L., Kuropatkin, N., .... Abramson, L. E., .... Bernstein, R. A., et al., The STRong lensing Insights into the Dark Energy Survey (STRIDES) 2016 follow-up campaign - II. New quasar lenses from double component fitting, *MNRAS*, 480, 5017-5028, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.480.5017A>

Appleton, P. N., Diaz-Santos, T., Fadda, D., .... Rich, J., et al., Jet-related Excitation of the [C II] Emission in the Active Galaxy NGC 4258 with SOFIA, *ApJ*, 869, 61, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...869...61A>

Ardila, F., Alatalo, K., Lanz, L., .... Beaton, R. L., .... Mulchaey, J. S., .... Rich, J. A., et al., Shocked POststarburst Galaxy Survey. III. The Ultraviolet Properties of SPOGs, *ApJ*, 863, 28, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...863...28A>

Ashall, C., Hoeflich, P., Hsiao, E. Y., Phillips, M. M., .... Piro, A. L., Burns, C., .... Morrell, N., et al., A Physical Basis for the H-band Blue-edge Velocity and Light-curve Shape Correlation in Context of Type Ia Supernova Explosion Physics, *ApJ*, 878, 86, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...878...86A>

Ashall, C., Hsiao, E. Y., Hoeflich, P., .... Phillips, M. M., Morrell, N., .... Piro, A. L., Burns, C., et al., Carnegie Supernova Project-II: Using Near-infrared Spectroscopy to Determine the Location of the Outer <sup>56</sup>Ni in Type Ia Supernovae, *ApJL*, 875, L14, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...875L..14A>

Asquith, R., Pearce, F. R., Almaini, O., .... Benson, A., et al., Cosmic CARNage II: the evolution of the galaxy stellar mass function in observations and galaxy formation models, *MNRAS*, 480, 1197-1210, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.480.1197A>



Audcent-Ross, F. M., Meurer, G. R., Wong, O. I., .... Seibert, M., et al., Near-identical star formation rate densities from H $\alpha$  and FUV at redshift zero, *MNRAS*, *480*, 119-133, 2018.  
<https://ui.adsabs.harvard.edu/abs/2018MNRAS.480..119A>

Bañados, E., Carilli, C., Walter, F., et al., A Powerful Radio-loud Quasar at the End of Cosmic Reionization, *ApJL*, *861*, L14, 2018.  
<https://ui.adsabs.harvard.edu/abs/2018ApJ...861L..14B>

Bañados, E., Rauch, M., Decarli, R., et al., A metal-poor damped Ly-alpha system at redshift 6.4, *arXiv*:1903.06186, 2019.  
<https://ui.adsabs.harvard.edu/abs/2019arXiv190306186B>

Banerjee, D. P. K., Hsiao, E. Y., Diamond, T., .... Morrell, N., et al., Unraveling the Infrared Transient VVV-WIT-06: The Case for the Origin as a Classical Nova, *ApJ*, *867*, 99, 2018.  
<https://ui.adsabs.harvard.edu/abs/2018ApJ...867...99B>

Baugh, C. M., Gonzalez-Perez, V., Lagos, C. del P., .... Benson, A. J., et al., Galaxy formation in the Planck Millennium: the atomic hydrogen content of dark matter halos, *MNRAS*, *483*, 4922-4937, 2019.  
<https://ui.adsabs.harvard.edu/abs/2019MNRAS.483.4922B>

Bean, J. L., Stevenson, K. B., Batalha, N. M., .... Teske, J., et al., The Transiting Exoplanet Community Early Release Science Program for JWST, *PASP*, *130*, 114402, 2018.  
<https://ui.adsabs.harvard.edu/abs/2018PASP..130k4402B>

Beaton, R. L., Bono, G., Braga, V. F., et al., Old-Aged Primary Distance Indicators, *SSRv*, *214*, 113, 2018.  
<https://ui.adsabs.harvard.edu/abs/2018SSRv..214..113B>

Belli, S., Newman, A. B., Ellis, R. S., MOSFIRE Spectroscopy of Quiescent Galaxies at  $1.5 < z < 2.5$ . II. Star Formation Histories and Galaxy Quenching, *ApJ*, *874*, 17, 2019.  
<https://ui.adsabs.harvard.edu/abs/2019ApJ...874...17B>

Benson, A. J., Covariances of galaxy stellar mass functions and correlation functions, *MNRAS*, *482*, 1062-1079, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.482.1062B>

Benson, A. J., Ludlow, A., Cole, S., Halo concentrations from extended Press-Schechter merger histories, *MNRAS*, *485*, 5010-5020, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.485.5010B>

Berton, M., Congiu, E., Ciroi, S., .... Di Mille, F., et al., The Interacting Late-type Host Galaxy of the Radio-loud Narrow-line Seyfert 1 IRAS 20181-2244, *AJ*, *157*, 48, 2019.

<https://ui.adsabs.harvard.edu/abs/2019AJ....157...48B>

Bianco, F. B., Drout, M. R., Graham, M. L., .... Cowperthwaite, P. S., et al., LSST Transient, With the Support of the Variable Stars Collaboration, Presto-Color: A Photometric Survey Cadence for Explosive Physics and Fast Transients, *PASP*, *131*, 068002, 2019.

<https://ui.adsabs.harvard.edu/abs/2019PASP..131f8002B>

Bixel, A., Rackham, B. V., Apai, D., .... Osip, D., et al., ACCESS: Ground-based Optical Transmission Spectroscopy of the Hot Jupiter WASP-4b, *AJ*, *157*, 68, 2019.

<https://ui.adsabs.harvard.edu/abs/2019AJ....157...68B>

Blanc, G. A., Lu, Y., Benson, A., Katsianis, A., Barraza, M., A Characteristic Mass Scale in the Mass–Metallicity Relation of Galaxies, *ApJ*, *877*, 6, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...877...6B>

Boada, S., Hughes, J. P., Menanteau, F., .... Infante, L., High Confidence Optical Confirmations among the High Signal-to-noise Planck Cluster Candidates, *ApJ*, *871*, 188, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...871..188B>

Boffin, H. M. J., Jones, D., Wesson, R., Beletsky, Y., et al., When nature tries to trick us. An eclipsing eccentric close binary superposed on the central star of the planetary nebula M 3-2, *A&A*, *619*, A84, 2018.

<https://ui.adsabs.harvard.edu/abs/2018A&A...619A..84B>

Bono, G., Iannicola, G., Braga, V. F., .... Beaton, R. L., .... Madore, B. F., et al., On a New Method to Estimate the Distance, Reddening, and Metallicity of RR Lyrae Stars Using

Optical/Near-infrared (B, V, I, J, H, K) Mean Magnitudes:  $\omega$  Centauri as a First Test Case, *ApJ*, 870, 115, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...870..115B>

Bose, S., Dong, S., Elias-Rosa, N., .... Morrell, N., .... Holoien, T. W.-S., Strongly Bipolar Inner Ejecta of the Normal Type IIP Supernova ASASSN-16at, *ApJL*, 873, L3, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...873L...3B>

Bose, S., Dong, S., Kochanek, C. S., .... Kollmeier, J., .... Holoien, T. W.-S., .... Madore, B. F., Rich, J. A., ASASSN-15nx: A Luminous Type II Supernova with a "Perfect" Linear Decline, *ApJ*, 862, 107, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...862..107B>

Bostroem, K. A., Valenti, S., Horesh, A., .... Piro, A. L., et al., Signatures of circumstellar interaction in the Type III supernova ASASSN-15oz, *MNRAS*, 485, 5120-5141, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.485.5120B>

Boutsia, K., Grazian, A., Giallongo, E., Fiore, F., Civano, F., A High Space Density of L\* Active Galactic Nuclei at  $z \sim 4$  in the COSMOS Field, *ApJ*, 869, 20, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...869...20B>

Braga, V. F., Stetson, P. B., Bono, G., .... Beaton, R. L., .... Madore, B. F., et al., New near-infrared JHK<sub>s</sub> light-curve templates for RR Lyrae variables, *A&A*, 625, A1, 2019.

<https://ui.adsabs.harvard.edu/abs/2019A&A...625A...1B>

Brauer, K., Ji, A. P., Frebel, A., Dooley, G. A., Gómez, F. A., O'Shea, B. W., The Origin of r-process Enhanced Metal-poor Halo Stars In Now-destroyed Ultra-faint Dwarf Galaxies, *ApJ*, 871, 247, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...871..247B>

Brout, D., Scolnic, D., Kessler, R., .... Uddin, S. A., et al., DES Collaboration, First Cosmology Results Using SNe Ia from the Dark Energy Survey: Analysis, Systematic Uncertainties, and Validation, *ApJ*, 874, 150, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...874..150B>

Brown, J. S., Stanek, K. Z., Holoien, T. W.-S., et al., The relative specific Type Ia supernovae rate from three years of ASAS-SN, *MNRAS*, *484*, 3785-3796, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.484.3785B>

Brown, P. J., Hosseinzadeh, G., Jha, S. W., .... Uddin, S., et al., Red and Reddened: Ultraviolet through Near-infrared Observations of Type Ia Supernova 2017erp, *ApJ*, *877*, 152, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...877..152B>

Burns, C. R., Parent, E., Phillips, M. M., .... Madore, B. F., Morrell, N., et al., The Carnegie Supernova Project: Absolute Calibration and the Hubble Constant, *ApJ*, *869*, 56, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...869...56B>

Cain, C., Baron, E., Phillips, M. M., .... Burns, C. R., Piro, A. L., et al., Investigating the Unusual Spectroscopic Time Evolution in SN 2012fr, *ApJ*, *869*, 162, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...869..162C>

Cain, M., Frebel, A., Gull, M., Ji, A. P., .... Hansen, T. T., et al., The R-Process Alliance: Chemical Abundances for a Trio of r-process-enhanced Stars—One Strong, One Moderate, and One Mild, *ApJ*, *864*, 43, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...864...43C>

Campillay, A. R., Arias, J. I., Barbá, R. H., Morrell, N. I., et al., Spectroscopic study of the extremely young O-type triple system Herschel 36 A in the Hourglass nebula - I. Orbital properties, *MNRAS*, *484*, 2137-2147, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.484.2137C>

Cañas, C. I., Stefansson, G., Monson, A. J., Teske, J. K., .... Beaton, R. L., .... Crane, J. D., .... Kollmeier, J. A., .... Shtetman, S. A., et al., TOI-150: A Transiting Hot Jupiter in the TESS Southern CVZ, *ApJL*, *877*, L29, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...877L..29C>

Carlsten, S. G., Beaton, R. L., Greco, J. P., Greene, J. E., Using Surface Brightness Fluctuations to Study nearby Satellite Galaxy Systems: The Complete Satellite System of M101, *ApJL*, *878*, L16, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...878L..16C>

Cawthon, R., Davis, C., Gatti, M., .... Bernstein, R. A., et al., DES Collaboration, Dark Energy Survey Year 1 Results: calibration of redMaGiC redshift distributions in DES and SDSS from cross-correlations, *MNRAS*, *481*, 2427-2443, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.481.2427C>

Champagne, J. B., Decarli, R., Casey, C. M., .... Bañados, E., et al., No Evidence for Millimeter Continuum Source Overdensities in the Environments of  $z \gtrsim 6$  Quasars, *ApJ*, *867*, 153, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...867..153C>

Chen, C.-T. J., Brandt, W. N., Luo, B., .... Kelson, D. D., et al., The XMM-SERVS survey: new XMM-Newton point-source catalogue for the XMM-LSS field, *MNRAS*, *478*, 2132-2163, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.478.2132C>

Chen, H.-W., Boettcher, E., Johnson, S. D., .... Rudie, G. C., .... Rauch, M., Mulchaey, J. S., A Giant Intragroup Nebula Hosting a Damped {Ly} $\alpha$  Absorber at  $z = 0.313$ , *ApJL*, *878*, L33, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...878L..33C>

Chen, H.-W., Johnson, S. D., Straka, L. A., et al., Characterizing circumgalactic gas around massive ellipticals at  $z \approx 0.4$  - III. The galactic environment of a chemically pristine Lyman limit absorber, *MNRAS*, *484*, 431-441, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.484..431C>

Chen, H.-W., Zahedy, F. S., Johnson, S. D., et al., Characterizing circumgalactic gas around massive ellipticals at  $z \approx 0.4$  - I. Initial results, *MNRAS*, *479*, 2547-2563, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.479.2547C>

Chilingarian, I. V., Katkov, I. Y., Zolotukhin, I. Y., .... Beletsky, Y., Boutsia, K., Osip, D. J., A Population of Bona Fide Intermediate-mass Black Holes Identified as Low-luminosity Active Galactic Nuclei, *ApJ*, *863*, 1, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...863...1C>

Cohn, J. H., Leja, J., Tran, K.-V. H., .... Kelson, D. D., et al., ZFOURGE: Extreme 5007 Å Emission May Be a Common Early-lifetime Phase for Star-forming Galaxies at  $z > 2.5$ , *ApJ*, 869, 141, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...869..141C>

Connor, T., Kelson, D. D., Blanc, G. A., Boutsia, K., Assembling a RELIC at Redshift 1: Spectroscopic Observations of Galaxies in the RELICS Cluster SPT-CLJ0615-5746, *ApJ*, 878, 66, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...878...66C>

Connor, T., Kelson, D. D., Donahue, M., Moustakas, J., On the Origin of the Scatter in the Red Sequence: An Analysis of Four CLASH Clusters, *ApJ*, 875, 16, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...875...16C>

Connor, T., Kelson, D. D., Mulchaey, J., Vikhlinin, A., Patel, S. G., et al., Wide-field Optical Spectroscopy of Abell 133: A Search for Filaments Reported in X-Ray Observations, *ApJ*, 867, 25, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...867...25C>

Cosens, M., Wright, S. A., Mieda, E., .... Walth, G., et al., Size-Luminosity Scaling Relations of Local and Distant Star-forming Regions, *ApJ*, 869, 11, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...869...11C>

Cowperthwaite, P. S., Villar, V. A., Scolnic, D. M., Berger, E., LSST Target-of-opportunity Observations of Gravitational-wave Events: Essential and Efficient, *ApJ*, 874, 88, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...874...88C>

Crnojević, D., Sand, D. J., Bennet, P., .... Simon, J. D., et al., The Faint End of the Centaurus A Satellite Luminosity Function, *ApJ*, 872, 80, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...872...80C>

Crocce, M., Ross, A. J., Sevilla-Noarbe, I., .... Bernstein, R. A., et al., Dark Energy Survey Collaboration, Dark Energy Survey year 1 results: galaxy sample for BAO measurement, *MNRAS*, 482, 2807-2822, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.482.2807C>

Cui, W., Knebe, A., Yepes, G., .... Benson, A., et al., The Three Hundred project: a large catalogue of theoretically modelled galaxy clusters for cosmological and astrophysical applications, *MNRAS*, *480*, 2898-2915, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.480.2898C>

D'Agostino, J. J., Poetrodjojo, H., Ho, I.-T., .... Madore, B. F., .... Seibert, M., Starburst-AGN mixing: TYPHOON observations of NGC 1365, NGC 1068, and the effect of spatial resolution on the AGN fraction, *MNRAS*, *479*, 4907-4935, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.479.4907D>

Davies, F. B., Hennawi, J. F., Bañados, E., et al., Quantitative Constraints on the Reionization History from the IGM Damping Wing Signature in Two Quasars at  $z > 7$ , *ApJ*, *864*, 142, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...864..142D>

Davies, F. B., Hennawi, J. F., Bañados, E., et al., Predicting Quasar Continua near Ly $\alpha$  with Principal Component Analysis, *ApJ*, *864*, 143, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...864..143D>

De, K., Kasliwal, M. M., Ofek, E. O., et al., A hot and fast ultra-stripped supernova that likely formed a compact neutron star binary, *Sci*, *362*, 201-206, 2018.

<https://ui.adsabs.harvard.edu/abs/2018Sci...362..201D>

De Rosa, G., Fausnaugh, M. M., Grier, C. J., .... Holoien, T. W.-S., et al., Velocity-resolved Reverberation Mapping of Five Bright Seyfert 1 Galaxies, *ApJ*, *866*, 133, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...866..133D>

Diamond, T. R., Hoeflich, P., Hsiao, E. Y., .... Phillips, M. M., .... Morrell, N., et al., Near-infrared Spectral Evolution of the Type Ia Supernova 2014J in the Nebular Phase: Implications for the Progenitor System, *ApJ*, *861*, 119, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...861..119D>

Díaz, M. R., Shectman, S. A., Butler, R. P., Jenkins, J. S., Deriving Iodine-free Spectra for High-resolution Echelle Spectrographs, *AJ*, *157*, 204, 2019.

<https://ui.adsabs.harvard.edu/abs/2019AJ....157..204D>

Dimitriadis, G., Foley, R. J., Rest, A., .... Piro, A. L., .... Drout, M. R., et al., K2 Observations of SN 2018oh Reveal a Two-component Rising Light Curve for a Type Ia Supernova, *ApJL*, *870*, L1, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...870L...1D>

Dimitriadis, G., Rojas-Bravo, C., Kilpatrick, C. D., .... Piro, A. L., et al., Nebular Spectroscopy of Kepler's Brightest Supernova, *ApJL*, *870*, L14, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...870L...14D>

Doctor, Z., Kessler, R., Herner, K., .... Cowperthwaite, P., et al., DES Collaboration, A Search for Optical Emission from Binary Black Hole Merger GW170814 with the Dark Energy Camera, *ApJL*, *873*, L24, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...873L..24D>

Dong, S., Katz, B., Kollmeier, J. A., .... Morrell, N., .... Holoien, T. W.-S., .... Phillips, M. M., Piro, A. L., .... Simon, J. D., et al., A significantly off-centre  $^{56}\text{Ni}$  distribution for the low-luminosity type Ia supernova SN 2016brx from the 100IAS survey, *MNRAS*, *479*, L70-L75, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.479L..70D>

Dong, S., Mérand, A., Delplancke-Ströbele, F., .... Holoien, T. W.-S., et al., First Resolution of Microlensed Images, *ApJ*, *871*, 70, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...871...70D>

Dragomir, D., Teske, J., Günther, M. N., .... Crane, J. D., .... Sheckman, S. A., et al., TESS Delivers Its First Earth-sized Planet and a Warm Sub-Neptune, *ApJL*, *875*, L7, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...875L...7D>

Dressler, A., Kelson, D. D., Abramson, L. E., Late Bloomer Galaxies: Growing Up in Cosmic Autumn, *ApJ*, *869*, 152, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...869..152D>

Erkal, D., Li, T. S., Koposov, S. E., .... Simon, J. D., et al., Modelling the Tucana III stream - a



close passage with the LMC, *MNRAS*, 481, 3148-3159, 2018.  
<https://ui.adsabs.harvard.edu/abs/2018MNRAS.481.3148E>

Espinoza, N., Rackham, B. V., Jordán, A., .... Osip, D. J., et al., ACCESS: a featureless optical transmission spectrum for WASP-19b from Magellan/IMACS, *MNRAS*, 482, 2065-2087, 2019.  
<https://ui.adsabs.harvard.edu/abs/2019MNRAS.482.2065E>

Feng, F., Crane, J. D., Xuesong Wang, S., Teske, J. K., Shectman, S. A., .... Thompson, I. B., et al., Search for Nearby Earth Analogs. I. 15 Planet Candidates Found in PFS Data, *ApJS*, 242, 25, 2019.  
<https://ui.adsabs.harvard.edu/abs/2019ApJS..242...25F>

Frebel, A., Ji, A. P., Ezzeddine, R., .... Thompson, I. B., et al., Chemical Abundance Signature of J0023+0307: A Second-generation Main-sequence Star with  $[Fe/H] < -6$ , *ApJ*, 871, 146, 2019.  
<https://ui.adsabs.harvard.edu/abs/2019ApJ...871..146F>

French, K. D., Yang, Y., Zabludoff, A. I., Tremonti, C. A., Clocking the Evolution of Post-starburst Galaxies: Methods and First Results, *ApJ*, 862, 2, 2018.  
<https://ui.adsabs.harvard.edu/abs/2018ApJ...862....2F>

French, K. D., Zabludoff, A. I., Identifying Tidal Disruption Events via Prior Photometric Selection of Their Preferred Hosts, *ApJ*, 868, 99, 2018.  
<https://ui.adsabs.harvard.edu/abs/2018ApJ...868...99F>

French, K. D., Zabludoff, A. I., Yoon, I., Shirley, Y., Yang, Y., Smercina, A., Smith, J. D., Narayanan, D., Why Post-starburst Galaxies Are Now Quiescent, *ApJ*, 861, 123, 2018.  
<https://ui.adsabs.harvard.edu/abs/2018ApJ...861..123F>

Frye, B. L., Pascale, M., Qin, Yujing, .... Walth, G., et al., PLCK G165.7+67.0: Analysis of a Massive Lensing Cluster in a Hubble Space Telescope Census of Submillimeter Giant Arcs Selected Using Planck/Herschel, *ApJ*, 871, 51, 2019.  
<https://ui.adsabs.harvard.edu/abs/2019ApJ...871...51F>

Fu, S. W., Simon, J. D., Shetrone, M., et al., The Origin of the 300 km s<sup>-1</sup> Stream near Segue 1, *ApJ*, 866, 42, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...866...42F>

Fuller, J., Piro, A. L., Jermyn, A. S., Slowing the spins of stellar cores, *MNRAS*, 485, 3661-3680, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.485.3661F>

Garofalo, A., Scowcroft, V., Clementini, G., .... Madore, B. F., et al., SMHASH: a new mid-infrared RR Lyrae distance determination for the Local Group dwarf spheroidal galaxy Sculptor, *MNRAS*, 481, 578-595, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.481..578G>

Gennaro, M., Geha, M., Tchernyshyov, K., .... Simon, J. D., et al., The Initial Mass Function in the Coma Berenices Dwarf Galaxy from Deep Near-infrared HST Observations, *ApJ*, 863, 38, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...863...38G>

Gieren, W., Storm, J., Konorski, P., .... Thompson, I., et al., The effect of metallicity on Cepheid period-luminosity relations from a Baade-Wesselink analysis of Cepheids in the Milky Way and Magellanic Clouds\*, *A&A*, 620, A99, 2018.

<https://ui.adsabs.harvard.edu/abs/2018A&A...620A..99G>

Gilman, D., Birrer, S., Treu, T., .... Benson, A., Probing dark matter structure down to 10<sup>7</sup> solar masses: flux ratio statistics in gravitational lenses with line of sight halos, *MNRAS.tmp*, 1618, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.tmp.1618G>

Ginsburg, A., Sipőcz, B. M., Brasseur, C. E., Cowperthwaite, P. S., et al., Astroquery Collaboration, a subset of the astropy Collaboration, astroquery: An Astronomical Web-querying Package in Python, *AJ*, 157, 98, 2019.

<https://ui.adsabs.harvard.edu/abs/2019AJ....157...98G>

Greig, B., Mesinger, A., Bañados, E., Constraints on reionization from the z = 7.5 QSO ULASJ1342+0928, *MNRAS*, 484, 5094-5101, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.484.5094G>

Gull, M., Frebel, A., Cain, M. G., .... Ji, A. P., .... Hansen, T. T., et al., The R-Process Alliance: Discovery of the First Metal-poor Star with a Combined r- and s-process Element Signature, *ApJ*, *862*, 174, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...862..174G>

Gutiérrez, C. P., Anderson, J. P., Sullivan, M., .... Morrell, N., et al., Type II supernovae in low-luminosity host galaxies, *MNRAS*, *479*, 3232-3253, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.479.3232G>

Hansen, T. T., Andersen, J., Nordström, B., et al., The role of binaries in the enrichment of the early Galactic halo. II. Carbon-enhanced metal-poor stars - CEMP-no stars (Corrigendum), *A&A*, *620*, C3, 2018.

<https://ui.adsabs.harvard.edu/abs/2018A&A...620C...3H>

Hartman, J. D., Bakos, G. Á., Bayliss, D., .... Crane, J., .... Shectman, S., .... Thompson, I., et al., HATS-60b-HATS-69b: 10 Transiting Planets from HATSouth, *AJ*, *157*, 55, 2019.

<https://ui.adsabs.harvard.edu/abs/2019AJ....157...55H>

Hartwig, T., Yoshida, N., Magg, M., .... Ji, A. P., et al., Descendants of the first stars: the distinct chemical signature of second-generation stars, *MNRAS*, *478*, 1795-1810, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.478.1795H>

Hasselquist, S., Carlin, J. L., Holtzman, J. A., .... Beaton, R. L., et al., Identifying Sagittarius Stream Stars by Their APOGEE Chemical Abundance Signatures, *ApJ*, *872*, 58, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...872...58H>

Hatt, D., Freedman, W. L., Madore, B. F., Beaton, R. L., .... Rich, J. A., .... Seibert, M., The Carnegie-Chicago Hubble Program. IV. The Distance to NGC 4424, NGC 4526, and NGC 4356 via the Tip of the Red Giant Branch, *ApJ*, *861*, 104, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...861..104H>

Hatt, D., Freedman, W. L., Madore, B. F., .... Beaton, R. L., .... Rich, J. A., .... Seibert, M., The Carnegie-Chicago Hubble Program. V. The Distances to NGC 1448 and NGC 1316 via the Tip of the Red Giant Branch, *ApJ*, *866*, 145, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...866..145H>

Hendel, D., Scowcroft, V., Johnston, K. V., .... Beaton, R. L., .... Kollmeier, J. A., .... Madore, B. F., .... Seibert, M., et al., SMHASH: anatomy of the Orphan Stream using RR Lyrae stars, *MNRAS*, *479*, 570-587, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.479..570H>

Hill, R., Chapman, S. C., Scott, D., .... Rudie, G., et al., Erratum to: The SCUBA-2 web survey: I. Observations of CO(3-2) in hyper-luminous QSO fields, *MNRAS*, *486*, 2790-2790, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.486.2790H>

Hill, R., Chapman, S. C., Scott, D., .... Rudie, G., et al., The SCUBA-2 web survey: I. Observations of CO(3-2) in hyper-luminous QSO field, *MNRAS*, *485*, 753-769, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.485..753H>

Hillier, D. J., Koenigsberger, G., Nazé, Y., Morrell, N., et al., The enigmatic binary system HD 5980, *MNRAS*, *486*, 725-742, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.486..725H>

Ho, I.-T., Meidt, S. E., Kudritzki, R.-P., .... Seibert, M., Madore, B. F., .... Rich, J. A., et al., Azimuthal variations of gas-phase oxygen abundance in NGC 2997, *A&A*, *618*, A64, 2018.

<https://ui.adsabs.harvard.edu/abs/2018A&A...618A..64H>

Holoien, T. W.-S., Brown, J. S., Auchettl, K., et al., The unusual late-time evolution of the tidal disruption event ASASSN-15oi, *MNRAS*, *480*, 5689-5703, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.480.5689H>

Holoien, T. W.-S., Brown, J. S., Vallely, P. J., .... Morrell, N., et al., The ASAS-SN bright supernova catalogue - IV. 2017, *MNRAS*, *484*, 1899-1911, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.484.1899H>

Horch, E. P., Tokovinin, A., Weiss, S. A., .... Teske, J. K., et al., Observations of Binary Stars with the Differential Speckle Survey Instrument. VIII. Measures of Metal-poor and Triple Stars from 2015 to 2018, *AJ*, *157*, 56, 2019.

<https://ui.adsabs.harvard.edu/abs/2019AJ....157...56H>

Hosseinzadeh, G., McCully, C., Zabludoff, A. I., .... French, K. D., et al., Type Ibn Supernovae May not all Come from Massive Stars, *ApJL*, *871*, L9, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...871L...9H>

Hsiao, E. Y., Phillips, M. M., Marion, G. H., .... Morrell, N., .... Burns, C. R., .... Piro, A. L., .... Uddin, S., et al., Carnegie Supernova Project-II: The Near-infrared Spectroscopy Program, *PASP*, *131*, 014002, 2019.

<https://ui.adsabs.harvard.edu/abs/2019PASP..131a4002H>

Huang, S., Katz, N., Davé, R., Fardal, M., Kollmeier, J., et al., The robustness of cosmological hydrodynamic simulation predictions to changes in numerics and cooling physics, *MNRAS*, *484*, 2021-2046, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.484.2021H>

Huber, D., Chaplin, W. J., Chontos, A., .... Teske, J., et al., A Hot Saturn Orbiting an Oscillating Late Subgiant Discovered by TESS, *AJ*, *157*, 245, 2019.

<https://ui.adsabs.harvard.edu/abs/2019AJ....157..245H>

IceCube Collaboration, Aartsen, M. G., Ackermann, M., .... Holoien, T. W.-S., et al., Multimessenger observations of a flaring blazar coincident with high-energy neutrino IceCube-170922A, *Sci*, *361*, eaat1378, 2018.

<https://ui.adsabs.harvard.edu/abs/2018Sci...361.1378I>

Jayasinghe, T., Kochanek, C. S., Stanek, K. Z., .... Holoien, T. W.-S., et al., The ASAS-SN catalogue of variable stars I: The Serendipitous Survey, *MNRAS*, *477*, 3145-3163, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.477.3145J>

Jayasinghe, T., Stanek, K. Z., Kochanek, C. S., .... Holoien, T. W.-S., et al., The ASAS-SN catalogue of variable stars - II. Uniform classification of 412 000 known variables, *MNRAS*, *486*, 1907-1943, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.486.1907J>

Jayasinghe, T., Stanek, K. Z., Kochanek, C. S., .... Holoien, T. W.-S., et al., The ASAS-SN catalogue of variable stars III: variables in the southern TESS continuous viewing zone, *MNRAS*, *485*, 961-971, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.485..961J>

Ji, A. P., Simon, J. D., Frebel, A., et al., Chemical Abundances in the Ultra-faint Dwarf Galaxies Grus I and Triangulum II: Neutron-capture Elements as a Defining Feature of the Faintest Dwarfs, *ApJ*, *870*, 83, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...870...83J>

Jiang, L., Wu, J., Bian, F., .... Blanc, G. A., Crane, J. D., et al., A giant protocluster of galaxies at redshift 5.7, *NatAs*, *2*, 962-966, 2018.

<https://ui.adsabs.harvard.edu/abs/2018NatAs...2..962J>

Jiang, T., Malhotra, S., Rhoads, J. E., Yang, H., Direct  $T_e$  Metallicity Calibration of R23 in Strong Line Emitters, *ApJ*, *872*, 145, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...872..145J>

Jiang, T., Malhotra, S., Yang, H., Rhoads, J. E., Correlation between SFR Surface Density and Thermal Pressure of Ionized Gas in Local Analogs of High-redshift Galaxies, *ApJ*, *872*, 146, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...872..146J>

Johnson, S. D., Chen, H.-W., Straka, L. A., .... Mulchaey, J. S., et al., Galaxy and Quasar Fueling Caught in the Act from the Intragroup to the Interstellar Medium, *ApJL*, *869*, L1, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...869L...1J>

Jones, M. I., Brahm, R., Espinoza, N., .... Osip, D., et al., HD 2685 b: a hot Jupiter orbiting an early F-type star detected by TESS, *A&A*, *625*, A16, 2019.

<https://ui.adsabs.harvard.edu/abs/2019A&A...625A..16J>

Jönsson, H., Allende Prieto, C., Holtzman, J. A., .... Teske, J., et al., APOGEE Data Releases 13 and 14: Stellar Parameter and Abundance Comparisons with Independent Analyses, *AJ*, *156*, 126, 2018.

<https://ui.adsabs.harvard.edu/abs/2018AJ....156..126J>

Jordán, A., Brahm, R., Espinoza, N., .... Osip, D., et al., K2-287 b: An Eccentric Warm Saturn Transiting a G-dwarf, *AJ*, *157*, 100, 2019.

<https://ui.adsabs.harvard.edu/abs/2019AJ....157..100J>

Joshi, B. A., Appleton, P. N., Blanc, G. A., .... Rich, J., et al., Evidence for Shock-heated Gas in the Taffy Galaxies and Bridge from Optical Emission-line IFU Spectroscopy, *ApJ*, *878*, 161, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...878..161J>

Juráňová, A., Werner, N., Gaspari, M., .... Connor, T., et al., Cooling in the X-ray halo of the rotating, massive early-type galaxy NGC 7049, *MNRAS*, *484*, 2886-2895, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.484.2886J>

Kedziora-Chudczer, L., Zhou, G., Bailey, J., .... Osip, D., et al., Secondary eclipses of WASP-18b - near-infrared observations with the Anglo-Australian Telescope, the Magellan Clay Telescope and the LCOGT network, *MNRAS*, *483*, 5110-5122, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.483.5110K>

Keller, L. D., Sloan, G. C., Oliveira, J. M., .... Simon, J. D., et al., Identification of Herbig Ae/Be Stars in the Small Magellanic Cloud, *ApJ*, *878*, 147, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...878..147K>

Kemp, A. J., Casey, A. R., Miles, M. T., .... Ji, A. P., On the discovery of K-enhanced and possibly Mg-depleted stars throughout the Milky Way, *MNRAS*, *480*, 1384-1392, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.480.1384K>

Kerzendorf, W. E., Do, T., de Mink, S. E., Götberg, Y., et al., No surviving non-compact stellar companion to Cassiopeia A, *A&A*, *623*, A34, 2019.

<https://ui.adsabs.harvard.edu/abs/2019A&A...623A..34K>

Kessler, R., Brout, D., D'Andrea, C. B., .... Uddin, S. A., et al., DES Collaboration, First cosmology results using Type Ia supernova from the Dark Energy Survey: simulations to correct supernova distance biases, *MNRAS*, *485*, 1171-1187, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.485.1171K>

Kilpatrick, C. D., Coulter, D. A., Dimitriadis, G., .... Piro, A. L., et al., X-ray limits on the progenitor system of the Type Ia supernova 2017ejb, *MNRAS*, *481*, 4123-4132, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.481.4123K>

Kollmeier, J. A., Raymond, S. N., Can moons have moons?, *MNRAS*, *483*, L80-L84, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.483L..80K>

Kozłowski, S., Bañados, E., Udalski, A., Morrell, N., Ji, A. P., et al., Discovery of Two Quasars at  $z = 5$  from the OGLE Survey, *ApJ*, *878*, 115, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...878..115K>

Kreckel, K., Faesi, C., Kruijssen, J. M. D., .... Blanc, G. A., et al., A 50 pc Scale View of Star Formation Efficiency across NGC 628, *ApJL*, *863*, L21, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...863L..21K>

Lakhchaura, K., Werner, N., Sun, M., .... Connor, T., et al., Thermodynamic properties, multiphase gas, and AGN feedback in a large sample of giant ellipticals, *MNRAS*, *481*, 4472-4504, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.481.4472L>

Lan, T.-W., Ménard, B., Baron, D., Johnson, S., et al., On the limitations of statistical absorption studies with the Sloan Digital Sky Surveys I-III, *MNRAS*, *477*, 3520-3529, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.477.3520L>

Laskar, T., Alexander, K. D., Berger, E., .... Drout, M. R., et al., First ALMA Light Curve Constrains Refreshed Reverse Shocks and Jet Magnetization in GRB 161219B, *ApJ*, *862*, 94, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...862...94L>



Law, D. R., Steidel, C. C., Chen, Y., Strom, A. L., Rudie, G. C., et al., Imaging Spectroscopy of Ionized Gaseous Nebulae around Optically Faint AGNs at Redshift  $z \sim 2$ , *ApJ*, 866, 119, 2018.  
<https://ui.adsabs.harvard.edu/abs/2018ApJ...866..119L>

Li, T. S., Simon, J. D., Kuehn, K., et al., DES Collaboration, The First Tidally Disrupted Ultra-faint Dwarf Galaxy?: A Spectroscopic Analysis of the Tucana III Stream, *ApJ*, 866, 22, 2018.  
<https://ui.adsabs.harvard.edu/abs/2018ApJ...866...22L>

Li, W., Wang, X., Vinkó, J., Mo, J., .... Piro, A. L., .... Holoien, T. W.-S., .... Drout, M. R., et al., Photometric and Spectroscopic Properties of Type Ia Supernova 2018oh with Early Excess Emission from the Kepler 2 Observations, *ApJ*, 870, 12, 2019.  
<https://ui.adsabs.harvard.edu/abs/2019ApJ...870...12L>

Lira, P., Kaspi, S., Netzer, H., Botti, I., Morrell, N., et al., Reverberation Mapping of Luminous Quasars at High  $z$ , *ApJ*, 865, 56, 2018.  
<https://ui.adsabs.harvard.edu/abs/2018ApJ...865...56L>

Lockhart, K. E., Do, T., Larkin, J. E., .... Walth, G., et al., Characterizing and Improving the Data Reduction Pipeline for the Keck OSIRIS Integral Field Spectrograph, *AJ*, 157, 75, 2019.  
<https://ui.adsabs.harvard.edu/abs/2019AJ....157...75L>

Macaulay, E., Nichol, R. C., Bacon, D., .... Uddin, S. A., et al., DES Collaboration, First cosmological results using Type Ia supernovae from the Dark Energy Survey: measurement of the Hubble constant, *MNRAS*, 486, 2184-2196, 2019.  
<https://ui.adsabs.harvard.edu/abs/2019MNRAS.486.2184M>

Mager, V. A., Conselice, C. J., Seibert, M., .... Madore, B. F., et al., Galaxy Structure in the Ultraviolet: The Dependence of Morphological Parameters on Rest-frame Wavelength, *ApJ*, 864, 123, 2018.  
<https://ui.adsabs.harvard.edu/abs/2018ApJ...864..123M>

Maíz Apellániz, J., Trigueros Páez, E., Negueruela, I., .... Morrell, N. I., et al., MONOS: Multiplicity Of Northern O-type Spectroscopic systems. I. Project description and spectral classifications and visual multiplicity of previously known objects, *A&A*, 626, A20, 2019.  
<https://ui.adsabs.harvard.edu/abs/2019A&A...626A..20M>

Marchi-Lasch, S., Muñoz, R. R., Santana, F. A., .... Simon, J. D., et al., A MegaCam Survey of Outer Halo Satellites. VII. A Single Sérsic Index versus Effective Radius Relation for Milky Way Outer Halo Satellites, *ApJ*, 874, 29, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...874...29M>

Margutti, R., Chornock, R., Metzger, B. D., .... Drout, M., et al., Results from a Systematic Survey of X-Ray Emission from Hydrogen-poor Superluminous SNe, *ApJ*, 864, 45, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...864...45M>

Margutti, R., Metzger, B. D., Chornock, R., .... Drout, M. R., et al., An Embedded X-Ray Source Shines through the Aspherical AT 2018cow: Revealing the Inner Workings of the Most Luminous Fast-evolving Optical Transients, *ApJ*, 872, 18, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...872...18M>

Martínez-Rodríguez, H., Badenes, C., Lee, S.-H., .... Piro, A. L., et al., Chandrasekhar and Sub-Chandrasekhar Models for the X-Ray Emission of Type Ia Supernova Remnants. I. Bulk Properties, *ApJ*, 865, 151, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...865..151M>

Mason, C. A., Fontana, A., Treu, T., .... Abramson, L., et al., Inferences on the timeline of reionization at  $\bar{z} \approx 8$  from the KMOS Lens-Amplified Spectroscopic Survey, *MNRAS*, 485, 3947-3969, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.485.3947M>

Massey, P., Levine, S. E., Neugent, K. F., .... Morrell, N., et al., A Runaway Giant in the Galactic Halo, *AJ*, 156, 265, 2018.

<https://ui.adsabs.harvard.edu/abs/2018AJ....156..265M>

Momjian, E., Carilli, C. L., Bañados, E., et al., Resolving the Powerful Radio-loud Quasar at  $\bar{z} \approx 6$ , *ApJ*, 861, 86, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...861...86M>

Morishita, T., Abramson, L. E., Treu, T., et al., Massive Dead Galaxies at  $z \sim 2$  with HST Grism Spectroscopy. I. Star Formation Histories and Metallicity Enrichment, *ApJ*, 877, 141, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...877..141M>

Muñoz Arancibia, A. M., González-López, J., Ibar, E., .... Infante, L., et al., The ALMA Frontier Fields Survey. IV. Lensing-corrected 1.1 mm number counts in Abell 2744, MACS J0416.1-2403 and MACS J1149.5+2223, *A&A*, 620, A125, 2018.

<https://ui.adsabs.harvard.edu/abs/2018A&A...620A.125M>

Muraveva, T., Garofalo, A., Scowcroft, V., .... Madore, B. F., et al., The Carnegie RR Lyrae Program: mid-infrared period-luminosity relations of RR Lyrae stars in Reticulum, *MNRAS*, 480, 4138-4153, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.480.4138M>

Neugent, K. F., Levesque, E. M., Massey, P., Morrell, N. I., Binary Red Supergiants. II. Discovering and Characterizing B-type Companions, *ApJ*, 875, 124, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...875..124N>

Neugent, K. F., Massey, P., Morrell, N., A Modern Search for Wolf-Rayet Stars in the Magellanic Clouds. IV. A Final Census, *ApJ*, 863, 181, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...863..181N>

Newman, A. B., Belli, S., Ellis, R. S., Patel, S. G., Resolving Quiescent Galaxies at  $z \gtrsim 2$ . I. Search for Gravitationally Lensed Sources and Characterization of Their Structure, Stellar Populations, and Line Emission, *ApJ*, 862, 125, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...862..125N>

Newman, A. B., Belli, S., Ellis, R. S., Patel, S. G., Resolving Quiescent Galaxies at  $z \gtrsim 2$ . II. Direct Measures of Rotational Support, *ApJ*, 862, 126, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...862..126N>

Olivares, J., Bouy, H., Sarro, L. M., .... Beletsky, Y., et al., Ruprecht 147 DANCe. I. Members, empirical isochrone, luminosity, and mass distributions, *A&A*, 625, A115, 2019.

<https://ui.adsabs.harvard.edu/abs/2019A&A...625A.115O>

Patel, S. G., Kelson, D. D., Diao, N., .... Abramson, L. E., Testing the Breathing Mode in Intermediate-mass Galaxies and Its Predicted Star Formation Rate-size Anti-correlation, *ApJL*, 866, L21, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...866L..21P>

Phillips, M. M., Contreras, C., Hsiao, E. Y., Morrell, N., Burns, C. R., .... Piro, A. L., .... Uddin, S. A., et al., Carnegie Supernova Project-II: Extending the Near-infrared Hubble Diagram for Type Ia Supernovae to  $z \sim 0.1$ , *PASP*, 131, 014001, 2019.

<https://ui.adsabs.harvard.edu/abs/2019PASP..131a4001P>

Pietrukowicz, P., Di Mille, F., Angeloni, R., Udalski, A., Identification of V735 Sgr as an Active Herbig Ae/Be Object, *AcA*, 68, 259-267, 2018.

<https://ui.adsabs.harvard.edu/abs/2018AcA....68..259P>

Pietrzyński, G., Graczyk, D., Gallenne, A., .... Thompson, I. B., et al., A distance to the Large Magellanic Cloud that is precise to one per cent, *Natur*, 567, 200-203, 2019.

<https://ui.adsabs.harvard.edu/abs/2019Natur.567..200P>

Pilecki, B., Dervişoğlu, A., Gieren, W., .... Thompson, I. B., et al., The Dynamical Mass and Evolutionary Status of the Type II Cepheid in the Eclipsing Binary System OGLE-LMC-T2CEP-211 with a Double-ring Disk, *ApJ*, 868, 30, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...868...30P>

Pilecki, B., Gieren, W., Pietrzyński, G., Thompson, I. B., et al., The Araucaria Project: High-precision Cepheid Astrophysics from the Analysis of Variables in Double-lined Eclipsing Binaries, *ApJ*, 862, 43, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...862...43P>

Pilo, S., Castellano, M., Fontana, A., .... Boutsia, K., et al., UV slope of  $z \sim 3$  bright ( $L > L^*$ ) Lyman-break galaxies in the COSMOS field, *A&A*, 626, A45, 2019.

<https://ui.adsabs.harvard.edu/abs/2019A&A...626A..45P>

Piro, A. L., Can Rocky Exoplanets with Rings Pose as Sub-Neptunes?, *AJ*, 156, 80, 2018.

<https://ui.adsabs.harvard.edu/abs/2018AJ....156...80P>

Piro, A. L., Exoplanets Torqued by the Combined Tides of a Moon and Parent Star, *AJ*, 156, 54, 2018.

<https://ui.adsabs.harvard.edu/abs/2018AJ....156...54P>

Piro, A. L., Gaensler, B. M., The Dispersion and Rotation Measure of Supernova Remnants and Magnetized Stellar Winds: Application to Fast Radio Bursts, *ApJ*, 861, 150, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...861..150P>

Placco, V. M., Santucci, R. M., Beers, T. C., .... Ji, A. P., et al., The R-Process Alliance: Spectroscopic Follow-up of Low-metallicity Star Candidates from the Best & Brightest Survey, *ApJ*, 870, 122, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...870..122P>

Prentice, S. J., Maguire, K., Smartt, S. J., .... Holoiien, T. W.-S., et al., The Cow: Discovery of a Luminous, Hot, and Rapidly Evolving Transient, *ApJL*, 865, L3, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...865L...3P>

Preston, G. W., Sneden, C., Chadid, M., Thompson, I. B., Sheckman, S. A., The Axial Rotation and Variable Macroturbulence of RR Lyrae and Red Horizontal Branch Stars, *AJ*, 157, 153, 2019.

<https://ui.adsabs.harvard.edu/abs/2019AJ....157..153P>

Putkuri, C., Gamen, R., Morrell, N. I., et al., Non-synchronous rotations in massive binary systems. HD 93343 revisited, *A&A*, 618, A174, 2018.

<https://ui.adsabs.harvard.edu/abs/2018A&A...618A.174P>

Reguitti, A., Pastorello, A., Pignata, G., .... Morrell, N. I., et al., Signatures of an eruptive phase before the explosion of the peculiar core-collapse SN 2013gc, *MNRAS*, 482, 2750-2769, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.482.2750R>

Relatores, N. C., Newman, A. B., Simon, J. D., et al., The Dark Matter Distributions in Low-mass Disk Galaxies. I. H $\alpha$  Observations Using the Palomar Cosmic Web Imager, *ApJ*, 873, 5, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...873...5R>

Renzo, M., Zapartas, E., de Mink, S. E., Götberg, Y., et al., Massive runaway and walkaway stars. A study of the kinematical imprints of the physical processes governing the evolution and explosion of their binary progenitors, *A&A*, *624*, A66, 2019.

<https://ui.adsabs.harvard.edu/abs/2019A&A...624A..66R>

Ribas, I., Tuomi, M., Reiners, A., .... Teske, J., .... Crane, J., .... Shectman, S. A., et al., A candidate super-Earth planet orbiting near the snow line of Barnard's star, *Natur*, *563*, 365-368, 2018.

<https://ui.adsabs.harvard.edu/abs/2018Natur.563..365R>

Rich, J. A., Madore, B. F., Monson, A. J., .... Beaton, R. L., .... Kollmeier, J. A., .... Seibert, M., The Carnegie-Chicago Hubble Program: Calibration of the Near-infrared RR Lyrae Period-Luminosity Relation with HST, *ApJ*, *869*, 82, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...869...82R>

Rodríguez, Ó., Pignata, G., Hamuy, M., .... Phillips, M. M., .... Morrell, N. I., et al., Type II supernovae as distance indicators at near-IR wavelengths, *MNRAS*, *483*, 5459-5479, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.483.5459R>

Roederer, I. U., Sakari, C. M., Placco, V. M., .... Hansen, T. T., The R-Process Alliance: A Comprehensive Abundance Analysis of HD 222925, a Metal-poor Star with an Extreme R-process Enhancement of  $[\text{Eu}/\text{H}] = -0.14$ , *ApJ*, *865*, 129, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...865..129R>

Rozyczka, M., Narloch, W., Schwarzenberg-Czerny, A., Thompson, I. B., et al., The Cluster AgeS Experiment (CASE). Variable Stars in the Field of the Globular Cluster M10, *AcA*, *68*, 237-258, 2018.

<https://ui.adsabs.harvard.edu/abs/2018AcA....68..237R>

Sakari, C. M., Placco, V. M., Farrell, E. M., .... Hansen, T., et al., The R-Process Alliance: First Release from the Northern Search for r-process-enhanced Metal-poor Stars in the Galactic Halo, *ApJ*, *868*, 110, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...868..110S>

Sameie, O., Benson, A. J., Sales, L. V., et al., The Effect of Dark Matter-Dark Radiation Interactions on Halo Abundance: A Press-Schechter Approach, *ApJ*, 874, 101, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...874..101S>

Sarkis, P., Henning, T., Hartman, J. D., .... Crane, J. D., Shectman, S., et al., HATS-59b,c: A Transiting Hot Jupiter and a Cold Massive Giant Planet around a Sun-like Star, *AJ*, 156, 216, 2018.

<https://ui.adsabs.harvard.edu/abs/2018AJ....156..216S>

Scalzo, R. A., Parent, E., Burns, C., .... Morrell, N., Phillips, M. M., Piro, A. L., et al., Probing type Ia supernova properties using bolometric light curves from the Carnegie Supernova Project and the CfA Supernova Group, *MNRAS*, 483, 628-647, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.483..628S>

Schlaufman, K. C., Thompson, I. B., Casey, A. R., An Ultra Metal-poor Star Near the Hydrogen-burning Limit, *ApJ*, 867, 98, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...867...98S>

Schlawin, E., Hirano, T., Kawahara, H., Teske, J., et al., Back to "Normal" for the Disintegrating Planet Candidate KIC 12557548 b, *AJ*, 156, 281, 2018.

<https://ui.adsabs.harvard.edu/abs/2018AJ....156..281S>

Schmidt, S. J., Shappee, B. J., van Saders, J. L., .... Drout, M. R., .... Holoien, T. W.-S., Johnson, S., Madore, B. F., .... Seibert, M., et al., The Largest M Dwarf Flares from ASAS-SN, *ApJ*, 876, 115, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...876..115S>

Shappee, B. J., Holoien, T. W.-S., Drout, M. R., et al., Seeing Double: ASASSN-18bt Exhibits a Two-component Rise in the Early-time K2 Light Curve, *ApJ*, 870, 13, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...870...13S>

Shen, Y., Wu, J., Jiang, L., Bañados, E., et al., Gemini GNIRS Near-infrared Spectroscopy of 50 Quasars at  $z \gtrsim 5.7$ , *ApJ*, 873, 35, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...873...35S>

Shields, J. V., Jayasinghe, T., Stanek, K. Z., .... Holoien, T. W.-S., et al., An all-sky search for R Coronae Borealis stars in ASAS-SN, *MNRAS*, *483*, 4470-4478, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.483.4470S>

Shin, J., Plotkin, R. M., Woo, J.-H., Gallo, E., Mulchaey, J. S., A Catalog of X-Ray Point Sources in the Abell 133 Region, *ApJS*, *238*, 23, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJS..238...23S>

Silverberg, S. M., Kuchner, M. J., Wisniewski, J. P., .... Teske, J. K., et al., Disk Detective Collaboration, Follow-up Imaging of Disk Candidates from the Disk Detective Citizen Science Project: New Discoveries and False Positives in WISE Circumstellar Disk Surveys, *ApJ*, *868*, 43, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...868...43S>

Simcoe, R. A., Fűrész, G., Sullivan, P. W., .... Sheckman, S. A., Kollmeier, J. A., et al., Background-limited Imaging in the Near Infrared with Warm InGaAs Sensors: Applications for Time-domain Astronomy, *AJ*, *157*, 46, 2019.

<https://ui.adsabs.harvard.edu/abs/2019AJ....157...46S>

Simon, J. D., Gaia Proper Motions and Orbits of the Ultra-faint Milky Way Satellites, *ApJ*, *863*, 89, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...863...89S>

Soares-Santos, M., Palmese, A., Hartley, W., .... Cowperthwaite, P. S., et al., LIGO Scientific Collaboration, Virgo Collaboration, First Measurement of the Hubble Constant from a Dark Standard Siren using the Dark Energy Survey Galaxies and the LIGO/Virgo Binary–Black-hole Merger GW170814, *ApJL*, *876*, L7, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...876L...7S>

Steidel, C. C., Bogosavljević, M., Shapley, A. E., .... Rudie, G. C., .... Strom, A. L., The Keck Lyman Continuum Spectroscopic Survey (KLCS): The Emergent Ionizing Spectrum of Galaxies at  $\bar{z} \approx 3$ , *ApJ*, *869*, 123, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...869..123S>



Stern, J., Faucher-Giguère, C.-A., Hennawi, J. F., .... Johnson, S. D., et al., Does Circumgalactic O VI Trace Low-pressure Gas Beyond the Accretion Shock? Clues from HI and Low-ion Absorption, Line Kinematics, and Dust Extinction, *ApJ*, 865, 91, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...865...91S>

Stoppacher, D., Prada, F., Montero-Dorta, A. D., .... Benson, A. J., et al., A semi-analytical perspective on massive galaxies at  $z \sim 0.55$ , *MNRAS*, 486, 1316-1331, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.486.1316S>

Stritzinger, M. D., Shappee, B. J., Piro, A. L., .... Holoiën, T. W.-S., Phillips, M. M., Burns, C. R., ... Morrell, N., et al., Red versus Blue: Early Observations of Thermonuclear Supernovae Reveal Two Distinct Populations?, *ApJL*, 864, L35, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...864L..35S>

Strom, A. L., Steidel, C. C., Rudie, G. C., et al., Measuring the Physical Conditions in High-redshift Star-forming Galaxies: Insights from KBSS-MOSFIRE, *ApJ*, 868, 117, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...868..117S>

Suchomska, K., Graczyk, D., Pietrzyński, G., .... Thompson, I. B., et al., Accurate stellar parameters and distance to two evolved eclipsing binary systems, OGLE-BLG-ECL-123903 and OGLE-BLG-ECL-296596, towards the Galactic bulge, *A&A*, 621, A93, 2019.

<https://ui.adsabs.harvard.edu/abs/2019A&A...621A..93S>

Sun, A.-L., Greene, J. E., Zakamska, N. L., .... Johnson, S. D., et al., Imaging extended emission-line regions of obscured AGN with the Subaru Hyper Suprime-Cam Survey, *MNRAS*, 480, 2302-2323, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.480.2302S>

Teske, J. K., Ciardi, D. R., Howell, S. B., et al., The Effects of Stellar Companions on the Observed Transiting Exoplanet Radius Distribution, *AJ*, 156, 292, 2018.

<https://ui.adsabs.harvard.edu/abs/2018AJ....156..292T>

Theios, R. L., Steidel, C. C., Strom, A. L., Rudie, G. C., et al., Dust Attenuation, Star Formation, and Metallicity in  $z \sim 2-3$  Galaxies from KBSS-MOSFIRE, *ApJ*, 871, 128, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...871..128T>

Tomičić, N., Ho, I.-T., Kreckel, K., .... Blanc, G. A., et al., Calibrating Star Formation Rate Prescriptions at Different Scales (10 pc-1 kpc) in M31, *ApJ*, 873, 3, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...873...3T>

Trakhtenbrot, B., Arcavi, I., Ricci, C., .... Phillips, M. M., et al., A new class of flares from accreting supermassive black holes, *NatAs*, 3, 242-250, 2019.

<https://ui.adsabs.harvard.edu/abs/2019NatAs...3..242T>

Treu, T., Agnello, A., Baumer, M. A., .... Abramson, L. E., et al., The STRong lensing Insights into the Dark Energy Survey (STRIDES) 2016 follow-up campaign - I. Overview and classification of candidates selected by two techniques, *MNRAS*, 481, 1041-1054, 2018.

<https://ui.adsabs.harvard.edu/abs/2018MNRAS.481.1041T>

Tucker, M. A., Shappee, B. J., Holoiien, T. W.-S., et al., ASASSN-18ey: The Rise of a New Black Hole X-Ray Binary, *ApJL*, 867, L9, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...867L...9T>

U, V., Medling, A. M., Inami, H., .... Rich, J., et al., Keck OSIRIS AO LIRG Analysis (KOALA): Feedback in the Nuclei of Luminous Infrared Galaxies, *ApJ*, 871, 166, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...871..166U>

Utomo, D., Sun, J., Leroy, A. K., .... Blanc, G. A., et al., Star Formation Efficiency per Free-fall Time in nearby Galaxies, *ApJL*, 861, L18, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...861L..18U>

Van Dyk, S. D., Zheng, W., Maund, J. R., .... Piro, A. L., et al., The Type II-plateau Supernova 2017eaw in NGC 6946 and Its Red Supergiant Progenitor, *ApJ*, 875, 136, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...875..136V>

Venemans, B. P., Decarli, R., Walter, F., Bañados, E., et al., Dust Emission in an Accretion-rate-limited Sample of  $z \gtrsim 6$  Quasars, *ApJ*, 866, 159, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...866..159V>

Viironen, K., López-Sanjuan, C., Hernández-Monteaquedo, C., .... Infante, L., et al., High redshift galaxies in the ALHAMBRA survey. II. Strengthening the evidence of bright-end excess in UV luminosity functions at  $2.5 \leq z \leq 4.5$  by PDF analysis, *A&A*, *614*, A129, 2018.

<https://ui.adsabs.harvard.edu/abs/2018A&A...614A.129V>

Wade, G. A., Smoker, J. V., Evans, C. J., .... Morrell, N., et al., A remarkable change of the spectrum of the magnetic Of?p star HD 148937 reveals evidence of an eccentric, high-mass binary, *MNRAS*, *483*, 2581-2591, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.483.2581W>

Walter, F., Riechers, D., Novak, M., .... Bañados, E., et al., No Evidence for Enhanced [O III] 88  $\mu\text{m}$  Emission in a  $z \approx 6$  Quasar Compared to Its Companion Starbursting Galaxy, *ApJL*, *869*, L22, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...869L..22W>

Walth, G. L., Egami, E., Clément, B., et al., Infrared Galaxies in the Field of the Massive Cluster Abell S1063: Discovery of a Luminous Kiloparsec-sized H II Region in a Gravitationally Lensed Infrared-luminous Galaxy at  $z = 0.6$ , *ApJ*, *877*, 7, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...877....7W>

Wang, F., Yang, J., Fan, X., .... Bañados, E., .... Beletsky, Y., The Discovery of a Luminous Broad Absorption Line Quasar at a Redshift of 7.02, *ApJL*, *869*, L9, 2018.

<https://ui.adsabs.harvard.edu/abs/2018ApJ...869L...9W>

Wilson, J. C., Hearty, F. R., Skrutskie, M. F., .... Crane, J., .... Di Mille, F., .... Uomoto, A., .... Shectman, S. A., et al., The Apache Point Observatory Galactic Evolution Experiment (APOGEE) Spectrographs, *PASP*, *131*, 055001, 2019.

<https://ui.adsabs.harvard.edu/abs/2019PASP..131e5001W>

Winters, J. G., Medina, A. A., Irwin, J. M., .... Teske, J. K., et al., Three Red Suns in the Sky: A Transiting, Terrestrial Planet in a Triple M Dwarf System at 6.9 Parsecs, *arXiv*:1906.10147, 2019.

<https://ui.adsabs.harvard.edu/abs/2019arXiv190610147W>

Yang, H., Infante, L., Rhoads, J. E., Hu, W., Zheng, Z., Malhotra, S., Wang, J., Barrientos, L. F., Kang, W., Jiang, C., Ly $\alpha$  Galaxies in the Epoch of Reionization (LAGER): Spectroscopic Confirmation of Two Redshift  $\sim 7.0$  Galaxies, *ApJ*, 876, 123, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...876..123Y>

Yang, J., Wang, F., Fan, X., .... Bañados, E., et al., Filling in the Quasar Redshift Gap at  $\bar{z} \sim 5.5$ . II. A Complete Survey of Luminous Quasars in the Post-reionization Universe, *ApJ*, 871, 199, 2019.

<https://ui.adsabs.harvard.edu/abs/2019ApJ...871..199Y>

Yang, J., Wang, F., Fan, X., .... Bañados, E., Beletsky, Y., Exploring Reionization-era Quasars. IV. Discovery of Six New  $z \gtrsim 6.5$  Quasars with DES, VHS, and unWISE Photometry, *AJ*, 157, 236, 2019.

<https://ui.adsabs.harvard.edu/abs/2019AJ....157..236Y>

Zahedy, F. S., Chen, H.-W., Johnson, S. D., .... Rauch, M., et al., Characterizing circumgalactic gas around massive ellipticals at  $\bar{z} \sim 0.4$  - II. Physical properties and elemental abundances, *MNRAS*, 484, 2257-2280, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.484.2257Z>

Zahedy, F. S., Rauch, M., Chen, H.-W., et al., Probing IGM accretion on to faint Ly $\alpha$  emitters at  $\bar{z} \sim 2.8$ , *MNRAS*, 486, 1392-1403, 2019.

<https://ui.adsabs.harvard.edu/abs/2019MNRAS.486.1392ZB>

Zhang, H., Ouchi, M., Itoh, R., .... Rauch, M., et al., CHORUS. III. Photometric and Spectroscopic Properties of Ly $\alpha$  Blobs at  $z = 4.9-7.0$ , *arXiv:1905.09841*, 2019.

<https://ui.adsabs.harvard.edu/abs/2019arXiv190509841Z>

Zhou, G., Bakos, G. Á., Bayliss, D., .... Osip, D., et al., HATS-70b: A 13 MJ Brown Dwarf Transiting an A Star, *AJ*, 157, 31, 2019.

<https://ui.adsabs.harvard.edu/abs/2019AJ....157...31Z>

Zhou, J., Wang, Z., Chen, L., .... Morrell, N., et al., A 34.5 day quasi-periodic oscillation in  $\gamma$ -ray emission from the blazar PKS 2247-131, *NatCo*, 9, 4599, 2018.

<https://ui.adsabs.harvard.edu/abs/2018NatCo...9.4599Z>

**Plant B  
iology  
Bibliography 2018 – 2019**

---

Banf M, Zhao K, **Rhee SY** (2019) METACLUSTER - an R package for context-specific functionality analysis of metabolic gene clusters. *Bioinformatics* btz021, <https://doi.org/10.1093/bioinformatics/btz021>

Bouain N, Korte A, Satbhai SB, **Rhee SY**, Busch W, Rouached H (2019) Systems approaches provide new insights into Arabidopsis thaliana root growth under mineral nutrient limitation. *BioRxiv* 460360; doi: <https://doi.org/10.1101/460360> *PLOS Genetics* Accepted

Clowez, S., Cleves, P., Krediet, C.J., Pringle, J., **Grossman, A.R.** (2019) Sugar impacts photosynthetic activity and symbiont capacity of Symbiodinium sp. In Preparation.

Clowez, S., Renicke, C., Saroussi, S., **Grossman, A.R.** (2019) Impact of menthol on bleaching and photosynthetic activity of free-living and symbiotic Breviolum spp. SSB01 (Dinoflagellata, Dinophyceae). *J Phycol.* In Revision.

Esherick, L.Y., DeNofrio, J.C., Krediet, C.J., Tolleter, D., Xiang, T., **Grossman, A.R.**, Pringle, J.R. (2019) Relative contributions of host and algal genotypes to bleaching susceptibility in a cnidarian-dinoflagellate symbiosis. In Preparation.

**Exposito-Alonso, M.**, 500 Genomes Field Experiment Team, Burbano, H. A., Bossdorf, O., Nielsen, R., Weigel, D. (2019) Natural selection in the Arabidopsis thaliana genome in present and future climates. *Nature*, <https://doi.org/10.1038/s41586-019-1520-9>

Fan, J., Zheng, I., Bai, Y., Saroussi, S., **Grossman, A.R.** (2018) Flocculation of Chlamydomonas reinhardtii with different phenotypic traits by metal cations and high pH. *Frontiers in Plant Science*. Nov 20;8: 1997. doi: 10.3389/fpls.2017.01997.

Foo, S.A., Liddell, L., **Grossman, A.R.**, Caldeira, K. (2019) Photo-movement in the sea anemone *Aiptasia* influenced by light quality and symbiotic association. *Coral Reefs*. In Press.

Gabr, A., **Grossman, A.R.**, Bhattacharya, D. (2019) *Paulinella* as a model for understanding primary endosymbiosis. *J Phycol.* In Submission.

Garcia VJ, **Xu SL**, Raksha R, Wang W, Elliott L, Fensenko M, Altmann M, Falter-Braun, P, Moore I, Assadd FF, Wang ZY. *Proteomic Studies of the Arabidopsis TRAPP complexes reveal conserved organization and a novel plant-specific component with a role in plant development*. 2019. *BioRxiv*. doi: <https://doi.org/10.1101/684258>

Gorman, L.M., Wilkinson, S.P., Oakley, C.A., **Grossman, A.R.**, Weis, V. M., Davy, S.K. (2019) Phylogenetic analyses of cell-cycle regulatory proteins within the Symbiodiniacea. In Preparation.

**Grossman, A.R.**, Sanz-Luque, E., Yi, H., Yang, W. (2019) Building the GreenCut2 suite of proteins to unmask photosynthetic function and regulation. *Microbiology*. 165:697-718. doi: 10.1099/mic.0.000788. [Epub ahead of print].

Halim, R., Hill, D.R.A., Hanssen, E.G. Webley, P.A., Blackburn, S, **Grossman, A.R.**, Posten, C., Martin, G.J.O. (2019) Induction of autolytic cell-wall self-ingestion in lipid-rich *Nannochloropsis* under thermally coupled dark-anoxia incubation. *Green Chemistry* (Royal Society of Chemistry). DOI. 10.1039/C8GC03186J

Han, L, Li, L, Muehlbauer GJ, Fowler JE, **Evans, MMS.** (2019) RNA isolation and analysis of lncRNAs from gametophytes of maize. In, *Methods in Molecular Biology, Plant Long Non-Coding RNAs: Methods and Protocols*, J.A. Chekanova, **1933**: 67-86. [https://doi.org/10.1007/978-1-4939-9045-0\\_4](https://doi.org/10.1007/978-1-4939-9045-0_4)

Hong, H., Kim, J.A., Han, M., Yoo, G., Song, H.W., Chae, Y., Pyun. J.-C., **Grossman, A.R.**, Ryu, WH. (2018) Prolonged and Highly Efficient Intracellular Extraction of Photosynthetic Electrons from Single Algal Cells by Optimized Nanoelectrode Insertion. *Nano Research*. 11: 397-408.

Jin H, Lindblad P, **Bhaya D.** [Building an Inducible T7 RNA Polymerase/T7 Promoter Circuit in \*Synechocystis\* sp. PCC6803](#). *ACS Synth Biol*. 2019 Apr 19;8(4):655-660. doi: 10.1021/acssynbio.8b00515. Epub 2019 Apr 3. PMID:30935196

Jin H, Wang Y, Idoine A, **Bhaya D**. [Construction of a Shuttle Vector Using an Endogenous Plasmid From the Cyanobacterium \*Synechocystis\* sp. PCC6803](#). *Front Microbiol*. 2018 Jul 24;9:1662. doi: 10.3389/fmicb.2018.01662. eCollection 2018. PMID: 30087668. [Free PMC Article](#)

Kaye, Y., Huang, W., Saroussi, S., Idoine, A., Clowez, S., Sanz-Luque, E., **Grossman, A.R.** (2019) *Chlamydomonas reinhardtii* Mitochondrial Alternative Oxidases Allows Survival in High Light. *J Biol Chem*. 294(4):1380-1395. doi: 10.1074/jbc.RA118.004667.

Kim EJ, Lee SH, Park CH, Kim SH, Hsu CC, **Xu S**, Wang Z, Kim SK, Kim TW (2019). [Plant U-Box 40 Mediates Degradation of the Brassinosteroid-Responsive Transcription Factor BZR1 in Arabidopsis Roots](#). *Plant Cell*. 2019 Apr;31(4):791-808. doi: <https://doi.org/10.1105/tpc.18.00941>

Kim TW, Park CH, Hsu CC, Zhu JY, Hsiao Y, Branon TC, **Xu SL**, Ting AY, Wang ZY. *Application of TurboID-mediated proximity labeling for mapping a GSK3 kinase signaling network in Arabidopsis*. 2019. *BioRxiv*. doi: <https://doi.org/10.1101/636324>

Kim TW, Youn JH, Park TK, Kim EJ, Park CH, **Wang ZY**, Kim SK, Kim TW (2018). OST1 Activation by the Brassinosteroid-Regulated Kinase CDG1-LIKE1 in Stomatal Closure. *Plant Cell*. 2018 Aug;30(8):1848-1863.

Li X., Patena W., Fauser F. Jinkerson RE, Saroussi S, Ivanova N, Robertson JM, Yue R, Zhang R, Vilarrasa-Blasi J, Ramundo S, Blum SR, Goh A, Laudon IM, Lefebvre PA, **Grossman, A.R.**, Jonikas MC (2019) A genome-wide algal mutant library reveals a global view of genes required for eukaryotic photosynthesis. *Nature Genetics*. 51(4):627-635. doi: 10.1038/s41588-019-0370-6.

Lin F, Fan J, **Rhee SY** (2019) QTG-Finder: a machine-learning algorithm to prioritize causal genes of quantitative trait loci in plants bioRxiv 484204; doi: <https://doi.org/10.1101/484204> *Genes/Genomes/Genetics (Accepted)*

Lu Y, Hokin SA, Kermicle JL, Hartwig T, **Evans MMS**. (2019) A Pistil-Expressed Pectin Methyltransferase Confers Cross-Incompatibility Between Strains of *Zea mays*. *Nature Communications* 10: 2304, <http://doi.org/10.1038/s41467-019-10259-0>.

Mair A, **Xu SL**, Branon TC, Ting AY, Bergmann DC. *Proximity labeling of protein complexes and cell-type specific organellar proteomes in Arabidopsis enabled by TurboID*. 2019. *BioRxiv*. doi: <https://doi.org/10.1101/629675>.



Mathews, J.L., Oakley, C.A., Lutz, A., Hillyer, K.E., Roessner, U., **Grossman, A.R.**, Weis, V.M., Simon, S.K. (2018) Partner switching and metabolic flux in a model cnidarian–dinoflagellate symbiosis. *Proceedings Royal Society B*. 28:285.

Park CH, Youn JH, **Xu SL**, Kim JG, Bi Y, Xu N, Mudgett SK, Kim TW, Wang ZY. BSUI family phosphatases mediate Flagellin-FLS2 signaling through a specific phosphocode. 2019. *BioRxiv*. doi: <https://doi.org/10.1101/685610>.

Petroutsos, D., **Grossman, A.R.** et al. (2019) Carbon metabolism controls photoprotection in *Chlamydomonas* via the light harvesting complex stress response protein LHCSR3. In Preparation.

**Rhee SY**, Birnbaum KD, Ehrhardt DW (2019) Towards Building a Plant Cell Atlas. *Trends in Plant Science* 24(4):303-310

Rosen MJ, Davison M, Fisher DS, **Bhaya D**. [Probing the ecological and evolutionary history of a thermophilic cyanobacterial population via statistical properties of its microdiversity](#). *PLoS One*. 2018 Nov 14;13(11):e0205396. doi: 10.1371/journal.pone.0205396. eCollection 2018. PMID:30427861. [Free PMC Article](#)

Sanz-Luque, E., Saroussi, S., **Grossman, A.R.** (2019) The role of the polyphosphate in the control of cellular acclimation processes. Invited review. Preparation.

Saroussi, S., Karns, D., Thomas, D., Posewitz, M., **Grossman, A.R.** (2019) Electron flow in *Chlamydomonas reinhardtii* in the absence of major energy sinks and reversible inactivation of cytochrome b6f. *Nature Comm*. In Revision.

Saroussi, S., Karns, D., Thomas, D., Posewitz, P., **Grossman, A.R.** (2019) Alternative outlets for sustaining photosynthetic electron transport during dark to light transitions. *Proc Natl Acad Sci USA*. 116 (23):11518-11527. <https://doi.org/10.1073/pnas.1903185116>.

Sasso, S., Stibor, H., Mittag, M., **Grossman, A.R.** (2018) The natural history of model organisms: From molecular manipulation of domesticated *Chlamydomonas reinhardtii* to survival in nature. *eLife*. *Elife*. 2018 Nov 1;7. pii: e39233. doi: 10.7554/eLife.39233.



Song L, Chen W, Wang B, Yao QM, Valliyodan B, Bai MY, Zhao MZ, Ye H, **Wang ZY**, Nguyen HT (2019). GmBZL3 acts as a major BR signaling regulator through crosstalk with multiple pathways in Glycine max. *BMC Plant Biol.* 2019 Feb 22;19(1):86.

Sproles, A.E., Kirk, N.L., Kitchen, S.A., Oakley, C.A., Weis V.M., **Grossman, A.R.**, Davy, S.K. (2018) Phylogenetic characterization of transporter proteins in the cnidarian-dinoflagellate symbiosis. *Mol Phylogenet Evol.* 120:307-320.

Sproles, A.E., Oakley, C.A., Krueger, T., **Grossman, A.R.**, Weis, V.M., Meibom, A., Davy, S.K. (2019) Sub-cellular imaging of a model symbiosis shows reduced photosynthetic carbon assimilation of heterologous endosymbiont *Durudinium trenchii* in *Aiptasia* host. In Preparation.

Sproles, A.E., Oakley, C.A., Matthews, J.L., Peng, L., **Grossman, A.R.**, Weis, V.M., Davy, S.K. (2019) Proteomics quantifies protein expression changes in a model cnidarian colonised by a thermally tolerant but suboptimal symbiont *ISME Journal*. doi: 10.1038/s41396-019-0437-5. [Epub ahead of print] PMID: 31118473.

Wittkopp, T., Heinnickel, M., Kim, R., Yang, W., Niyogi, K., **Grossman, A.R.** (2018) The GreenCut protein CPLD49 and its function in maintaining the stability of the cytochrome b6f complex. *Plant Journal.* 94:1023-1037.

Xiang, T., Jinkerson, R.E., Clowez, S., Tran, C., Krediet, C.J., Onishi, M., Pringle, J.R., **Grossman, A.R.** (2018) Glucose-induced trophic shift of a clade B Symbiodinium strain and its physiological and molecular consequences. *Plant Physiol.* Dec 7. pii: pp.01572.2017. doi: 10.1104/pp.17.01572.

Xiang, T., Lehnert, E., Clowez, C., Pringle, J., DeNofrio, J.C., **Grossman, A.R.** (2019) Integration of nitrogen and carbon metabolism in the Symbiodinium cnidarian association. *Nature Comm.* In Revision.

Zhao JL, Zhang LQ, Liu N, Xu SL, Yue ZL, Zhang LL, Deng ZP, Burlingame AL, Sun DY, **Wang ZY**, Sun Y, Zhang SW (2019). Mutual Regulation of Receptor-Like Kinase SIT1 and B'κ-PP2A Shapes the Early Response of Rice to Salt Stress. *Plant Cell*.31:2131-2151. doi: 10.1105/tpc.18.00706. Epub 2019 Jun 20.

Zhao JL, Zhang N, Liu LQ, **Xu SL**, Yue ZL, Zhang LL, Deng Z, Burlingame AL, Su DY, Wang ZY, Sun Y, Zhang SW. Mutual Regulation of receptor-like kinase SIT and B'k-PP2A shapes the early response of rice to salt stress. 2019. *Plant Cell*. doi: <https://doi.org/10.1105/tpc.18.00706>

Zhao K and Rhee SY (2019) Epigenomic Landscape of *Arabidopsis thaliana* Metabolism Reveals Bivalent Chromatin on Specialized Metabolic Genes. *BioRxiv* 589036; doi: <https://doi.org/10.1101/589036>

## Terrestrial Magnetism

Here updated through September 1, 2019. The list is regularly updated on the DTM web site (<http://dtm.carnegiescience.edu>).

- 8032 Alexander, C. M. O'D., Quantitative models for the elemental and isotopic fractionations in the chondrites: the non-carbonaceous chondrites, *Geochim. Cosmochim. Acta* 254, 246-276, 2019.
- 8033 Alexander, C. M. O'D., Quantitative models for the elemental and isotopic fractionations in chondrites: the carbonaceous chondrites, *Geochim. Cosmochim. Acta* 254, 277-309, 2019.
- 8049 Amit, H., R. Deguen, P. Driscoll, and T. Nakagawa, Stratification in the cores of Earth and other planets, *Front. Earth Sci.* 7, 165, 2019.
- 8008 Arnold, J. A., A. J. Weinberger, G. Videen, and E. S. Zubko, The effect of dust composition and shape on radiation-pressure forces and blowout sizes of particles in debris disks, *Astron. J.* 157, 157, 2019.
- 7953 Bae, J., P. Pinilla, and T. Birnstiel, Diverse protoplanetary disk morphology produced by a Jupiter-mass planet, *Astrophys. J. Lett.* 864, L26, 2018.
- 8000 Bar, N., M. D. Long, L. S. Wagner, S. L. Beck, G. Zandt, and H. Tavera, Receiver function analysis reveals layered anisotropy in the crust and upper mantle beneath southern Peru and northern Bolivia, *Tectonophysics* 753, 93-110, 2019.
- 7949 Baron, F., É. Artigau, J. Rameau, D. Lafrenière, J. Gagné, L. Malo, L. Albert, M.-E. Naud, R. Doyon, M. Janson, P. Delorme, and C. Beichman, WEIRD: Wide-orbit Exoplanet search with InfraRed Direct imaging, *Astron. J.* 156, 137, 2018.
- 8074 Batanova, V. G., J. M. Thompson, L. V. Danyushevsky, M. V. Portnyagin, D. Garbe-Schönberg, E. Hauri, J. I. Kimura, Q. Chang, R. Senda, K. Goemann, C. Chauvel, S. Campillo, D. A. Ionov, and A. V. Sobolev, New olivine reference material for *in situ* microanalysis, *Geostand. Geoanal. Res.* 43, 453-473, 2019.

- 7957 Bean, J. L., K. B. Stevenson, N. M. Batalha, Z. Berta-Thompson, L. Kreidberg, N. Crouzet, B. Benneke, M. R. Line, D. K. Sing, H. R. Wakeford, H. A. Knutson, E. M.-R. Kempton, J. M. Désert, I. Crossfield, N. E. Batalha, J. de Wit, V. Parmentier, J. Harrington, J. I. Moses, M. Lopez-Morales, M. K. Alam, J. Blečić, G. Bruno, A. L. Carter, J. W. Chapman, L. Decin, D. Dragomir, T. M. Evans, J. J. Fortney, J. D. Fraine, P. Gao, A. García Muñoz, N. P. Gibson, J. M. Goyal, K. Heng, R. Y. Hu, S. Kendrew, B. M. Kilpatrick, J. Krick, P.-O. Lagage, M. Lendl, T. Louden, N. Madhusudhan, A. M. Mandell, M. Mansfield, E. M. May, G. Morello, C. V. Morley, N. Nikolov, S. Redfield, J. E. Roberts, E. Schlawin, J. J. Spake, K. O. Todorov, A. Tsiaras, O. Venot, W. C. Waalkes, P. J. Wheatley, R. T. Zellem, D. Angerhausen, D. Barrado, L. Carone, S. L. Casewell, P. E. Cubillos, M. Damiano, M. de Val-Borro, B. Drummond, B. Edwards, M. Endl, N. Espinoza, K. France, J. E. Gizis, T. P. Greene, T. K. Henning, Y. C. Hong, J. G. Ingalls, N. Iro, P. G. J. Irwin, T. Kataria, F. Lahuis, J. Leconte, J. Lillo-Box, S. Lines, J. D. Lothringer, L. Mancini, F. Marchis, N. Mayne, E. Palle, E. Rauscher, G. Roudier, E. L. Shkolnik, J. Southworth, M. R. Swain, J. Taylor, J. Teske, G. Tinetti, P. Tremblin, G. S. Tucker, R. van Boekel, I. P. Waldmann, I. C. Weaver, and T. Zingales, *The Transiting Exoplanet Community Early Release Science Program for JWST*, *Publ. Astron. Soc. Pacific* 130, 114402, 2018.
- 8012 Booth, M., L. Matrà, K. Y. L. Su, Q. Kral, A. S. Hales, W. R. F. Dent, A. M. Hughes, M. A. MacGregor, T. Löhne, and D. J. Wilner, Deep ALMA search for CO gas in the HD 95086 debris disc, *Mon. Not. Roy. Astron. Soc.* 482, 3443-3452, 2019.
- 7995 Boss, A., *Universal Life: an Inside Look Behind the Race to Discover Life Beyond Earth*, Oxford University Press, New York, 206 pp., 2019.
- 7985 Boss, A. P., Triggering collapse of the presolar dense cloud core and injecting short-lived radioisotopes with a shock wave. VI. Protostar and protoplanetary disk formation, *Astrophys. J.* 870, 3, 2019.
- Boss, A. P., The effect of the approach to gas disk gravitational instability on the rapid formation of gas giant planets, *Astrophys. J.*, in press.
- 8010 Bremner, P. M., M. P. Panning, R. M. Russo, V. Mocanu, A. C. Stanciu, M. Torpey, S. Hongsresawat, J. C. VanDecar, T. A. LaMaskin, and D. A. Foster, Crustal shear wave velocity structure of central Idaho and eastern Oregon from ambient seismic noise: results from the IDOR project, *J. Geophys. Res. Solid Earth* 124, 1601-1625, 2019.
- Butler, R. P., H. R. A. Jones, F. Feng, M. Tuomi, G. Anglada-Escudé, and S. Keiser, A reanalysis of the UVES M dwarf planet search program, *Astron. J.*, in press.
- 8021 Byrne, P. K., C. Klimczak, and A. M. Celâl Şengör, The tectonic character of Mercury, in *Mercury: the View after MESSENGER*, S. C. Solomon, L. R. Nittler, and B. J. Anderson, eds., pp. 249-286, Cambridge University Press, New York, 2018.

- 8022 Byrne, P. K., J. L. Whitten, C. Klimczak, F. M. McCubbin, and L. R. Ostrach, The volcanic character of Mercury, in *Mercury: the View after MESSENGER*, S. C. Solomon, L. R. Nittler, and B. J. Anderson, eds., pp. 287-323, Cambridge University Press, New York, 2018.
- 8040 Cañas, C. I., G. Stefansson, A. J. Monson, J. K. Teske, C. F. Bender, S. Mahadevan, C. Aerts, R. L. Beaton, R. P. Butler, K. R. Covey, J. D. Crane, N. De Lee, M. R. Díaz, S. W. Fleming, D. A. García-Hernández, F. R. Hearty, J. A. Kollmeier, S. R. Majewski, C. Nitschelm, D. P. Schneider, S. A. Shectman, K. G. Stassun, A. Tkachenko, S. X. Wang, S. Wang, J. C. Wilson, and R. F. Wilson, TOI-150: a transiting hot Jupiter in the *TESS* southern CVZ, *Astrophys. J. Lett.* *877*, L29, 2019.
- 8026 Canitano, A., H. Gonzalez-Huizar, Y.-J. Hsu, H.-M. Lee, A. T. Linde, and S. Sacks, Testing the influence of static and dynamic stress perturbations on the occurrence of a shallow, slow slip event in eastern Taiwan, *J. Geophys. Res. Solid Earth* *124*, 3073-3087, 2019.
- 8060 Carlson, R. W., Analysis of lunar samples: implications for planet formation and evolution, *Science* *365*, 240-243, 2019.
- 7971 Carlson, R. W., R. Brasser, Q.-Z. Yin, M. Fischer-Gödde, and L. P. Qin, Feedstocks of the terrestrial planets, *Space Sci. Rev.* *214*, 121, 2018.
- 8043 Carlson, R. W., and D. A. Ionov, Compositional characteristics of the MORB mantle and bulk silicate earth based on spinel peridotites from the Tariat region, Mongolia, *Geochim. Cosmochim. Acta* *257*, 206-223, 2019.
- 7990 Cerpa, N. G., I. Wade, and C. R. Wilson, Effects of fluid influx, fluid viscosity, and fluid density on fluid migration in the mantle wedge and their implications for hydrous melting, *Geosphere* *15*, 1-23, 2019.
- 7956 Chambers, J., Planet formation: an optimized population-synthesis approach, *Astrophys. J.* *865*, 30, 2018.
- 8061 Chambers, J., An analytic model for an evolving protoplanetary disk with a disk wind, *Astrophys. J.* *879*, 98, 2019.
- 8009 Chambers, J. E., Symplectic integrators: T plus V revisited and round-off reduced, *Mon. Not. Roy. Astron. Soc.* *483*, 5574-5582, 2019.
- 7961 Chandler, C. O., A. M. Curtis, M. Mommert, S. S. Sheppard, and C. A. Trujillo, SAFARI: Searching Asteroids For Activity Revealing Indicators, *Publ. Astron. Soc. Pacific* *130*, 114502, 2018.
- 8029 Clement, M. S., N. A. Kaib, and J. E. Chambers, Dynamical constraints on Mercury's collisional origin, *Astron. J.* *157*, 208, 2019.

- 8004 Clement, M. S., N. A. Kaib, S. N. Raymond, J. E. Chambers, and K. J. Walsh, The early instability scenario: terrestrial planet formation during the giant planet instability, and the effect of collisional fragmentation, *Icarus* 321, 778-790, 2019.
- Davidson, J., C. M. O'D. Alexander, R. M. Stroud, H. Busemann, and L. R. Nittler, Mineralogy and petrology of Dominion Range 08006: a very primitive CO<sub>3</sub> carbonaceous chondrite, *Geochim. Cosmochim. Acta*, in press.
- 7974 Davies, J. H. F. L., T. E. Sheldrake, J. R. Reimink, J.-F. Wotzlav, C. Moeck, and A. Finlay, Investigating complex isochron data using mixture models, *Geochem. Geophys. Geosyst.* 19, 4035-4047, 2018.
- 7966 De Rosa, G., M. M. Fausnaugh, C. J. Grier, B. M. Peterson, K. D. Denney, K. Horne, M. C. Bentz, S. Ciroi, E. Dalla Bontà, M. D. Joner, S. Kaspi, C. S. Kochanek, R. W. Pogge, S. G. Sergeev, M. Vestergaard, S. M. Adams, J. Antognini, C. Araya Salvo, E. Armstrong, J. Bae, A. J. Barth, T. G. Beatty, A. Bhattacharjee, G. A. Borman, T. A. Boroson, M. C. Bottorff, J. E. Brown, J. S. Brown, M. S. Brotherton, C. T. Coker, C. Clanton, V. Cracco, S. M. Crawford, K. V. Croxall, S. Eftekharzadeh, M. Eracleous, S. L. Fiorenza, A. Frassati, K. Hawkins, C. B. Henderson, T. W.-S. Holoien, T. Hutchison, J. Kellar, E. Kilerci-Eser, S. Kim, A. L. King, G. Mura, C. D. Laney, M. Li, C. Lochhaas, Z. Ma, F. MacInnis, E. R. Manne-Nicholas, M. Mason, S. M. McGraw, K. Mogren, C. Montouri, J. W. Moody, A. M. Mosquera, D. Mudd, R. Musso, S. V. Nazarov, M. L. Nguyen, P. Ochner, D. N. Okhmat, C. A. Onken, B. Ou-Yang, A. Pancoast, L. Pei, M. Penny, R. Poleski, E. Portaluri, J.-L. Prieto, A. M. Price-Whelan, N. G. Pulatova, S. Rafter, R. M. Roettenbacher, E. Romero-Colmenero, J. Runnoe, J. S. Schimoia, B. J. Shappee, N. Sherf, G. V. Simonian, A. Siviero, D. M. Skowron, J. Skowron, G. Somers, M. Spencer, D. A. Starkey, D. J. Stevens, R. Stoll, E. Tamajo, J. Tayar, J. L. van Saders, S. Valenti, S. Villanueva, Jr., C. Villforth, Y. Weiss, H. Winkler, J. Zastrow, W. Zhu, and Y. Zu, Velocity-resolved reverberation mapping of five bright Seyfert 1 galaxies, *Astrophys. J.* 866, 133, 2018.
- 7999 Demouchy, S., A. Tommasi, D. Ionov, K. Higgie, and R. W. Carlson, Microstructures, water contents, and seismic properties of the mantle lithosphere beneath the northern limit of the Hangay Dome, Mongolia, *Geochem. Geophys. Geosyst.* 20, 183-207, 2019.
- 7959 Desch, S. J., A. Kalyaan, and C. M. O'D. Alexander, The effect of Jupiter's formation on the distribution of refractory elements and inclusions in meteorites, *Astrophys. J. Suppl. Ser.* 238, 11, 2018.
- 8028 Díaz, M. R., S. A. Sheckman, R. P. Butler, and J. S. Jenkins, Deriving iodine-free spectra for high-resolution echelle spectrographs, *Astron. J.* 157, 204, 2019.

- 7955 Dieterich, S. B., A. J. Weinberger, A. P. Boss, T. J. Henry, W.-C. Joa, J. Gagné, T. L. Astraatmadja, M. A. Thompson, and G. Anglada-Escudé, Dynamical masses of  $\epsilon$  Indi B and C: two massive brown dwarfs at the edge of the stellar-substellar boundary, *Astrophys. J.* **865**, 28, 2018.
- 8015 Dragomir, D., J. Teske, M. N. Günther, D. Ségransan, J. A. Burt, C. X. Huang, A. Vanderburg, E. Matthews, X. Dumusque, K. G. Stassun, J. Pepper, E. R. Ricker, R. Vanderspek, D. W. Latham, S. Seager, J. N. Winn, J. M. Jenkins, T. Beatty, R. Bouchy, T. M. Brown, R. P. Butler, A. R. Ciardi, J. D. Crane, J. D. Eastman, L. Fossati, J. Francis, B. J. Fulton, B. S. Gaudi, R. F. Goeke, D. James, T. C. Klaus, R. B. Kuhn, C. Lovis, M. B. Lund, S. McDermott, M. Paegert, F. Pepe, J. E. Rodriguez, L. Sha, S. A. Shectman, A. Shporer, R. J. Siverd, A. Garcia Soto, D. J. Stevens, J. D. Twicken, S. Udry, S. Villanueva, Jr., S. X. Wang, B. Wohler, X. Yao, and Z. Zhan, *TESS* delivers its first Earth-sized planet and a warm sub-Neptune, *Astrophys. J. Lett.* **875**, L7, 2019.
- 7991 Driscoll, P., Geodynamo recharged, *Nature Geosci.* **12**, 83-84, 2019.
- 7994 Driscoll, P. E., Planetary interiors, magnetic fields, and habitability, in *Handbook of Exoplanets*, H. J. Deeg and J. A. Belmonte, eds., pp. 2917-2935, Springer, Cham, Switzerland, 2018.
- 8072 Driscoll, P. E., and Z. Du, Geodynamo conductivity limits, *Geophys. Res. Lett.* **46**, 7982-7989, 2019.
- 8063 Du, Z., A. Boujibar, P. Driscoll, and Y. Fei, Experimental constraints on an MgO exsolution-driven geodynamo, *Geophys. Res. Lett.* **46**, 7379-7385, 2019.
- 8025 Durante, D., D. J. Hemingway, P. Racioppa, L. Iess, and D. J. Stevenson, Titan's gravity field and interior structure after Cassini, *Icarus* **326**, 123-132, 2019.
- 8013 Elardo, S. M., A. Shahar, T. D. Mock, and C. K. Sio, The effect of core composition on iron isotope fractionation between planetary cores and mantles, *Earth Planet. Sci. Lett.* **513**, 124-134, 2019.
- 7972 Faherty, J. K., J. Gagné, A. J. Burgasser, E. E. Mamajek, E. C. Gonzales, D. C. Bardalez Gagliuff, and F. Marocco, A late-type L dwarf at 11 pc hiding in the Galactic plane characterized using *Gaia* DR2, *Astrophys. J.* **868**, 44, 2018.
- 8068 Farrah, D., K. Ennico Smith, D. Ardila, C. M. Bradford, M. J. DiPirro, C. Ferkinhoff, J. Glenn, P. F. Goldsmith, D. T. Leisawitz, T. Nikola, N. Rangwala, S. A. Rinehart, J. G. Staguhn, M. Zemcov, J. Zmuidzinas, J. Bartlett, S. J. Carey, W. J. Fischer, J. R. Kamenetzky, J. Kartaltepe, M. D. Lacy, D. C. Lis, L. S. Locke, E. Lopez-Rodriguez, M. MacGregor, E. Mills, S. H. Moseley, E. J. Murphy, A. Rhodes, M. J. Richter, D. Rigopoulou, D. B. Sanders, R. Sankrit, G. Savini, J.-D. Smith, and S. Stierwalt, Review: far-infrared instrumentation and technological development for the next decade, *J. Astron. Telesc. Instrum. Syst.* **5**, 020901, 2019.

- 8047 Feng, F. B., J. D. Crane, S. X. Wang, J. K. Teske, S. A. Shectman, M. R. Díaz, I. B. Thompson, H. R. A. Jones, and R. P. Butler, Search for nearby Earth analogs. I. 15 planet candidates found in PFS data, *Astrophys. J. Suppl. Ser.* 242, 25, 2019.
- Feng, F., M. Lisogorskyi, H. R. A. Jones, R. P. Butler, G. Anglada-Escudé, and A. P. Boss, PEXO, a package for precision exoplanetology. I. Relativistic model of timing, astrometry, and radial velocity, *Astrophys. J.*, in press.
- 7963 Ferriss, E., T. Plank, M. Newcombe, D. Walker, and E. Hauri, Rates of dehydration of olivines from San Carlos and Kilauea Iki, *Geochim. Cosmochim. Acta* 242, 165-190, 2018.
- 8076 Fisher, D. M., A. J. Smye, C. Marone, P. E. van Keken, and A. Yamaguchi, Kinetic models for healing of the subduction interface based on observations of ancient accretionary complexes, *Geochem. Geophys. Geosyst.* 20, 3431-3449, 2019.
- 7962 Gagné, J., J. K. Faherty, and E. E. Mamajek, Volans-Carina: a new 90 Myr old stellar association at 85 pc, *Astrophys. J.* 865, 136, 2018.
- 8005 Gaia Collaboration, L. Eyer, L. Rimoldini, M. Audard, R. I. Anderson, K. Nienartowicz, F. Glass, O. Marchal, M. Grenon, N. Mowlavi, B. Holl, G. Clementini, C. Aerts, T. Mazeh, D. W. Evans, L. Szabados, A. G. A. Brown, A. Vallenari, T. Prusti, J. H. J. de Bruijne, C. Babusiaux, C. A. L. Bailer-Jones, M. Biermann, F. Jansen, C. Jordi, S. A. Klioner, U. Lammers, L. Lindegren, X. Luri, F. Mignard, C. Panem, D. Pourbaix, S. Randich, P. Sartoretti, H. I. Siddiqui, C. Soubiran, F. van Leeuwen, N. A. Walton, F. Arenou, U. Bastian, M. Cropper, R. Drimmel, D. Katz, M. G. Lattanzi, J. Bakker, C. Cacciari, J. Castañeda, L. Chaoul, N. Cheek, F. De Angeli, C. Fabricius, R. Guerra, E. Masana, R. Messineo, P. Panuzzo, J. Portell, M. Riello, G. M. Seabroke, P. Tanga, F. Thévenin, G. Gracia-Abril, G. Comoretto, M. Garcia-Reinaldos, D. Teyssier, M. Altmann, R. Andrae, I. Bellas-Velidis, K. Benson, J. Berthier, R. Blomme, P. Burgess, G. Busso, B. Carry, A. Cellino, M. Clotet, O. Creevey, M. Davidson, J. De Ridder, L. Delchambre, A. Dell'Oro, C. Ducourant, J. Fernández-Hernández,

M. Fouesneau, Y. Frémat, L. Galluccio, M. García-Torres, J. González-Núñez, J. J. González-Vidal, E. Gosset, L. P. Guy, J.-L. Halbwachs, N. C. Hambly, D. L. Harrison, J. Hernández, D. Hestroffer, S. T. Hodgkin, A. Hutton, G. Jasniewicz, A. Jean-Antoine-Piccolo, S. Jordan, A. J. Korn, A. Krone-Martins, A. C. Lanzafame, T. Lebzelter, W. Löffler, M. Manteiga, P. M. Marrese, J. M. Martín-Fleitas, A. Moitinho, A. Mora, K. Muinonen, J. Osinde, E. Pancino, T. Pauwels, J.-M. Petit, A. Recio-Blanco, P. J. Richards, A. C. Robin, L. M. Sarro, C. Siopis, M. Smith, A. Sozzetti, M. Süveges, J. Torra, W. van Reeven, U. Abbas, A. Abreu Aramburu, S. Accart, G. Altavilla, M. A. Álvarez, R. Alvarez, J. Alves, A. H. Andrei, E. Anglada Varela, E. Antiche, T. Antoja, B. Arcay, T. L. Astraatmadja, N. Bach, S. G. Baker, L. Balaguer-Núñez, P. Balm, C. Barache, C. Barata, D. Barbato, F. Barblan, P. S. Barklem, D. Barrado, M. Barros, M. A. Barstow, S. Bartholomé Muñoz, J.-L. Bassilana, U. Becciani, M. Bellazzini, A. Berihuete, S. Bertone, L. Bianchi, O. Bienaymé, S. Blanco-Cuaresma, T. Boch, C. Boeche, A. Bombrun, R. Borrachero, D. Bossini, S. Bouquillon, G. Bourda, A. Bragaglia, L. Bramante, M. A. Breddels, A. Bressan, N. Brouillet, T. Brüsemeister, E. Brugaletta, B. Bucciarelli, A. Burlacu, D. Busonero, A. G. Butkevich, R. Buzzzi, E. Caffau, R. Cancelliere, G. Cannizzaro, T. Cantat-Gaudin, R. Carballo, T. Carlucci, J. M. Carrasco, L. Casamiquela, M. Castellani, A. Castro-Ginard, P. Charlot, L. Chemin, A. Chiavassa, G. Coccozza, G. Costigan, S. Cowell, F. Crifo, M. Crosta, C. Crowley, J. Cuypers, C. Dafonte, Y. Damerdj, A. Dapergolas, P. David, M. David, P. de Laverny, F. De Luise, R. De March, D. de Martino, R. de Souza, A. de Torres, J. Debosscher, E. del Pozo, M. Delbo, A. Delgado, H. E. Delgado, S. Diakite, C. Diener, E. Distefano, C. Dolding, P. Drazinos, J. Durán, B. Edvardsson, H. Enke, K. Eriksson, P. Esquej, G. Eynard Bontemps, C. Fabre, M. Fabrizio, S. Faigler, A. Falcão, M. Farràs Casas, L. Federici, G. Fedorets, P. Fernique, F. Figueras, F. Filippi, K. Findeisen, A. Fonti, E. Fraile, M. Fraser, B. Frézouls, M. Gai, S. Galleti, D. Garabato, F. García-Sedano, A. Garofalo, N. Garralda, A. Gavel, P. Gavras, J. Gerssen, R. Geyer, P. Giacobbe, G. Gilmore, S. Girona, G. Giuffrida, M. Gomes, M. Granvik, A. Gueguen, A. Guerrier, J. Guiraud, R. Gutiérrez-Sánchez, R. Haigron, D. Hatzidimitriou, M. Hauser, M. Haywood, U. Heiter, A. Helmi, J. Heu, T. Hilger, D. Hobbs, W. Hofmann, G. Holland, H. E. Huckle, A. Hupki, V. Icardi, K. Janssen, G. Jevardat de Fombelle, P. G. Jonker, Á. L. Juhász, F. Julbe, A. Karampelas, A. Kewley, J. Klar, A. Kochoska, R. Kohley, K. Kolenberg, M. Kontizas, E. Kontizas, S. E. Kuposov, G. Kordopatis, Z. Kostrzewa-Rutkowska, P. Koubsky, S. Lambert, A. F. Lanza, Y. Lasne, J.-B. Lavigne, Y. Le Fustec, C. Le Poncin-Lafitte, Y. Lebreton, S. Leccia, N. Leclerc, I. Lecoœur-Taïbi, H. Lenhardt, F. Leroux, S. Liao, E. Licata, H. E. P. Lindstrøm, T. A. Lister, E. Livanou, A. Lobel, M. López, D. Lorenz, S. Managau, R. G. Mann, G. Mantelet, J. M. Marchant, M. Marconi, S. Marinoni, G. Marschalkó, D. J. Marshall, M. Martino, G. Marton, N. Mary, D. Massari, G. Matijević, P. J. McMillan, S. Messina, D. Michalik, N. R. Millar, D. Molina, R. Molinaro, L. Molnár, P. Montegriffo, R. Mor, R. Morbidelli, T. Morel, S.



Morgenthaler, D. Morris, A. F. Mulone, T. Muraveva, I. Musella, G. Nelemans, L. Nicastro, L. Noval, W. O'Mullane, C. Ordénovic, D. Ordóñez-Blanco, P. Osborne, C. Pagani, I. Pagano, F. Pailler, H. Palacin, L. Palaversa, A. Panahi, M. Pawlak, A. M. Piersimoni, F.-X. Pineau, E. Plachy, G. Plum, E. Poggio, E. Poujoulet, A. Prša, L. Pulone, E. Racero, S. Ragaini, N. Rambaux, M. Ramos-Lerate, S. Regibo, C. Reylé, F. Riclet, V. Ripepi, A. Riva, A. Rivard, G. Rixon, T. Roegiers, M. Roelens, M. Romero-Gómez, N. Rowell, F. Royer, L. Ruiz-Dern, G. Sadowski, T. Sagristà Sellés, J. Sahlmann, J. Salgado, E. Salguero, N. Sanna, T. Santana-Ros, M. Sarasso, H. Savietto, M. Schultheis, E. Sciacca, M. Segol, J. C. Segovia, D. Ségransan, I.-C. Shih, L. Siltala, A. F. Silva, R. L. Smart, K. W. Smith, E. Solano, F. Solitro, R. Sordo, S. Soria Nieto, J. Souchay, A. Spagna, F. Spoto, U. Stampa, I. A. Steele, H. Steidelmüller, C. A. Stephenson, H. Stoev, F. F. Suess, J. Surdej, E. Szegedi-Elek, D. Tapiador, F. Taris, G. Tauran, M. B. Taylor, R. Teixeira, D. Terrett, P. Teyssandier, W. Thuillot, A. Titarenko, F. Torra Clotet, C. Turon, A. Ulla, E. Utrilla, S. Uzzi, M. Vaillant, G. Valentini, V. Valette, A. van Elteren, E. Van Hemelryck, M. van Leeuwen, M. Vaschetto, A. Vecchiato, J. Veljanoski, Y. Viala, D. Vicente, S. Vogt, C. von Essen, H. Voss, V. Votruba, S. Voutsinas, G. Walmsley, M. Weiler, O. Wertz, T. Wevers, Ł. Wyrzykowski, A. Yoldas, M. Žerjal, H. Ziaepour, J. Zorec, S. Zschocke, S. Zucker, C. Zurbach, and T. Zwitter, Gaia Data Release 2: variable stars in the colour-absolute magnitude diagram, *Astron. Astrophys.* 623, A110, 2019.

- 7952 Gonzales, E. C., J. K. Faherty, J. Gagné, É. Artigau, and D. Bardalez Gagliuffi, Understanding fundamental properties and atmospheric features of subdwarfs via a case study of SDSS J125637.13-022452.4, *Astrophys. J.* 864, 100, 2018.
- 8011 Got, J.-L., D. Amitrano, I. Stefanou, E. Brothelande, and A. Peltier, Damage and strain localization around a pressurized shallow-level magma reservoir, *J. Geophys. Res. Solid Earth* 124, 1443-1458, 2019.
- 7993 Gregg, P. M., H. Le Mével, Y. Zhan, J. Dufek, D. Geist, and W. W. Chadwick, Jr., Stress triggering of the 2005 eruption of Sierra Negra volcano, Galápagos, *Geophys. Res. Lett.* 45, 13288-13297, 2018.
- 7988 Hartman, J. D., G. Á. Bakos, D. Bayliss, J. Bento, W. Bhatti, R. Brahm, Z. Csubry, N. Espinoza, T. Henning, A. Jordán, L. Mancini, K. Penev, M. Rabus, P. Sarkis, V. Suc, M. de Val-Bono, G. Zhou, B. Addison, P. Arriagada, R. P. Butler, J. Crane, S. Durkan, S. Shectman, T. G. Tan, I. Thompson, C. G. Tinney, D. J. Wright, J. Lázár, I. Papp, and P. Sári, HATS-60b–HATS-69b: 10 transiting planets from HATSouth, *Astron. J.* 157, 55, 2019.
- 8023 Hauck, S. A., II, M. Grott, P. K. Byrne, B. W. Denevi, S. Stanley, and T. J. McCoy, Mercury's global evolution, in *Mercury: the View after MESSENGER*, S. C. Solomon, L. R. Nittler, and B. J. Anderson, eds., pp. 516-543, Cambridge University Press, New York, 2018.

- Hauri, E. H., E. Cottrell, K. A. Kelley, J. M. Tucker, K. Shimizu, M. Le Voyer, J. Marske, and A. E. Saal, Carbon in the convecting mantle, in *Deep Carbon: Past to Present*, B. N. Orcutt, I. Daniel, and R. Dasgupta, eds., Cambridge University Press, in press.
- 8064 Hemingway, D. J., and T. Mittal, Enceladus's ice shell structure as a window on internal heat production, *Icarus* 332, 111-131, 2019.
- 7965 Hsieh, H. H., M. Ishiguro, Y. Kim, M. M. Knight, Z.-Y. Lin, M. Micheli, N. A. Moskovitz, S. S. Sheppard, A. Thirouin, and C. A. Trujillo, The 2016 reactivations of the main-belt comets 238P/Read and 288P/(300163) 2006 VW<sub>139</sub>, *Astron. J.* 156, 223, 2018.
- 8059 Hu, J., N. Jiang, R. W. Carlson, J. Guo, W. Fan, F. Huang, S. Zhang, K. Zong, T. Li, and H. Yu, Metasomatism of the crust-mantle boundary by melts derived from subducted sedimentary carbonates and silicates, *Geochim. Cosmochim. Acta* 260, 311-328, 2019.
- 7978 Huang, C. X., J. Burt, A. Vanderburg, M. N. Günther, A. Shporer, J. A. Dittmann, J. N. Winn, R. Wittenmyer, L. Sha, S. R. Kane, G. R. Ricker, R. K. Vanderspek, D. W. Latham, S. Seager, J. M. Jenkins, D. A. Caldwell, K. A. Collins, N. Guerrero, J. C. Smith, S. N. Quinn, S. Udry, F. Pepe, F. Bouchy, D. Ségransan, C. Lovis, D. Ehrenreich, M. Marmier, M. Mayor, B. Wöhler, K. Haworth, E. H. Morgan, M. Fausnaugh, D. R. Ciardi, J. Christiansen, D. Charbonneau, D. Dragomir, D. Deming, A. Glidden, A. M. Levine, P. R. McCullough, L. Yu, N. Narita, T. Nguyen, T. Morton, J. Pepper, A. Pál, J. E. Rodriguez, K. G. Stassun, G. Torres, A. Sozzetti, J. P. Doty, J. Christensen-Dalsgaard, G. Laughlin, M. Clampin, J. L. Bean, L. A. Buchhave, G. Á. Bakos, B. Sato, S. Ida, L. Kaltenegger, E. Palle, D. Sasselov, R. P. Butler, J. Lissauer, J. Ge, and S. A. Rinehart, *TESS* discovery of a transiting super-Earth in the pi Mensae system, *Astrophys. J. Lett.* 868, L39, 2018.

- 8041 Huber, D., W. J. Chaplin, A. Chontos, H. Kjeldsen, J. Christensen-Dalsgaard, T. R. Bedding, W. Ball, R. Brahm, N. Espinoza, T. Henning, A. Jordán, P. Sarkis, E. Knudstrup, S. Albrecht, F. Grundahl, M. Fredslund Andersen, P. L. Pallé, I. Crossfield, B. Fulton, A. W. Howard, H. T. Isaacson, L. M. Weiss, R. Handberg, M. N. Lund, A. M. Serenelli, J. R. Rørsted Mosumgaard, A. Stokholm, A. Bieryla, L. A. Buchhave, D. W. Latham, S. N. Quinn, E. Gaidos, T. Hirano, G. R. Ricker, R. K. Vanderspek, S. Seager, J. M. Jenkins, J. N. Winn, H. M. Antia, T. Appourchaux, S. Basu, K. J. Bell, O. Benomar, A. Bonanno, D. L. Buzasi, T. L. Campante, Z. Ç. Orhan, E. Corsaro, M. S. Cunha, G. R. Davies, S. Deheuvels, S. K. Grunblatt, A. Hasanzadeh, M. Pia Di Mauro, R. A. García, P. Gaulme, L. Girardi, J. A. Guzik, M. Hon, C. Jiang, T. Kallinger, S. D. Kawaler, J. S. Kuzlewicz, Y. Lebreton, T. Li, M. Lucas, M. S. Lundkvist, A. W. Mann, S. Mathis, S. Mathur, A. Mazumdar, T. S. Metcalfe, A. Miglio, M. J. P. F. G. Monteiro, B. Mosser, A. Noll, B. Nsamba, J. M. J. Ong, S. Örtel, F. Pereira, P. Ranadive, C. Régulo, T. S. Rodrigues, I. W. Roxburgh, V. Silva Aguirre, B. Smalley, M. Schofield, S. G. Sousa, K. G. Stassun, D. Stello, J. Tayar, T. R. White, K. Verma, M. Vradar, M. Yildiz, D. Baker, M. Bazot, C. Beichmann, C. Bergmann, L. Bugnet, B. Cale, R. Carlino, S. M. Cartwright, J. L. Christiansen, D. R. Ciardi, O. Creevey, J. A. Dittmann, J.-D. Do Nascimento, Jr., V. Van Eylen,  
G. Fürész, J. Gagné, P. Gao, K. Gazeas, F. Giddens, O. J. Hall, S. Hekker, M. J. Ireland, N. Latouf, D. LeBrun, A. M. Levine, W. Matzko, E. Natinsky, E. Page, P. Plavchan, M. Mansouri-Samani, S. McCauliff, S. E. Mullally, B. Orenstein, A. Garcia Soto, M. Paegert, J. L. van Saders, C. Schnaible, D. R. Soderblom, R. Szabó, A. Tanner, C. G. Tinney, J. Teske, A. Thomas, R. Trampedach, D. Wright, T. T. Yuan, and F. Zohrabi, A hot Saturn orbiting an oscillating late subgiant discovered by *TESS*, *Astron. J.* **157**, 245, 2019.
- 8062 Isella, A., M. Benisty, R. Teague, J. Bae, M. Keppler, S. Facchini, and L. Pérez, Detection of continuum submillimeter emission associated with candidate protoplanets, *Astrophys. J. Lett.* **879**, L25, 2019.
- Isnard, R., A. Bardyn, N. Fray, C. Briois, H. Cottin, J. Paquette, O. Stenzel, C. Alexander, D. Baklouti, C. Engrand, F.-R. Ourthous-Daunay, S. Siljeström, K. Varnuza, and M. Hilchenbach, H/C elemental ratio of the refractory organic matter in cometary particles of 67P/Churyumov-Gerasimenko, *Astron. Astrophys.*, in press.
- 8048 Janiszewski, H. A., J. B. Gaherty, G. A. Abers, H. Gao, and Z. C. Eilon, Amphibious surface-wave phase-velocity measurements of the Cascadia subduction zone, *Geophys. J. Int.* **217**, 1929-1948, 2019.

- 8056 Jenkins, J. S., J. Harrington, R. C. Challener, N. T. Kurtovic, R. Ramirez, J. Peña, K. J. McIntyre, M. D. Himes, E. Rodríguez, G. Anglada-Escudé, S. Dreizler, A. Ofir, P. A. Peña Rojas, I. Ribas, P. Rojo, D. Kipping, R. P. Butler, P. J. Amado, C. Rodríguez-López, E. M.-R. Kempton, E. Palte, and F. Murgas, Proxima Centauri b is not a transiting exoplanet, *Mon. Not. Roy. Astron. Soc.* **487**, 268-274, 2019.
- 8042 Jones, R. E., P. E. van Keken, E. H. Hauri, J. M. Tucker, J. Vervoort, and C. J. Ballentine, Origins of the terrestrial Hf-Nd mantle array: evidence from a combined geodynamical-geochemical approach, *Earth Planet. Sci. Lett.* **518**, 26-39, 2019.
- 7992 Jones, S., F. K. Röpkke, C. Fryer, A. J. Ruitter, I. R. Seitenzahl, L. R. Nittler, S. T. Ohlmann, R. Reifarh, M. Pignatari, and K. Belczynski, Remnants and ejecta of thermonuclear electron-capture supernovae: constraining oxygen-neon deflagrations in high-density white dwarfs, *Astron. Astrophys.* **622**, A74, 2019.
- 7987 Jones, T. D., D. R. Davies, and P. A. Sossi, Tungsten isotopes in mantle plumes: heads it's positive, tails it's negative, *Earth Planet. Sci. Lett.* **506**, 255-267, 2019.
- 7951 Jönsson, H., C. Allende Prieto, J. A. Holtzman, D. K. Feuillet, K. Hawkins, K. Cunha, S. Mészáros, S. Hasselquist, J. G. Fernández-Trincado, D. A. García-Hernández, D. Bizyaev, R. Carrera, S. R. Majewski, M. H. Pinsonneault, M. Shetrone, V. Smith, J. Sobeck, D. Souto, G. S. Stringfellow, J. Teske, and O. Zamora, APOGEE Data Releases 13 and 14: stellar parameter and abundance comparisons with independent analyses, *Astron. J.* **156**, 126, 2018.
- 8045 Kane, S. R., P. A. Dalba, Z. Li, E. P. Horch, L. A. Hirsch, J. Horner, R. A. Wittenmyer, S. B. Howell, M. E. Everett, R. P. Butler, C. G. Tinney, B. D. Carter, D. J. Wright, H. R. A. Jones, J. Bailey, and S. J. O'Toole, Detection of planetary and stellar companions to neighboring stars via a combination of radial velocity and direct imaging techniques, *Astron. J.* **157**, 252, 2019.
- 8037 Kaplan, H. H., R. E. Milliken, C. M. O'D. Alexander, and C. D. K. Herd, Reflectance spectroscopy of insoluble organic matter (IOM) and carbonaceous meteorites, *Meteorit. Planet. Sci.* **54**, 1051-1068, 2019.
- 8067 Kebukawa, Y., C. M. O'D. Alexander, and G. D. Cody, Comparison of FT-IR spectra of bulk and acid insoluble organic matter in chondritic meteorites: an implication for missing carbon during demineralization, *Meteorit. Planet. Sci.* **54**, 1632-1641, 2019.
- 8036 Keppler, M., R. Teague, J. Bae, M. Benisty, T. Henning, R. van Boekel, E. Chapillon, P. Pinilla, J. P. Williams, G. H.-M. Bertrang, S. Facchini, M. Flock, C. Ginski, A. Juhasz, H. Klahr, Y. Liu, A. Müller, L. M. Pérez, A. Pohl, G. Rosotti, M. Samland, and D. Semenov, Highly structured disk around the planet host PDS70 revealed by high-angular resolution observations with ALMA, *Astron. Astrophys.* **625**, A118, 2019.

- 7967 Kim, W.-Y., M. Gold, J. Ramsay, A. Meltzer, D. Wunsch, S. Baxter, V. Lekic, P. Goodling, K. Pearson, L. Wagner, D. Roman, and T. L. Pratt, The  $M_w$  4.2 Delaware earthquake of 30 November 2017, *Seismol. Res. Lett.* **89**, 2447-2460, 2018.
- 8024 Le Voyer, M., E. H. Hauri, E. Cottrell, K. A. Kelley, V. J. M. Salters, C. H. Langmuir, D. R. Hilton, P. H. Barry, and E. Füre, Carbon fluxes and primary magma CO<sub>2</sub> contents along the global mid-ocean ridge system, *Geochem. Geophys. Geosyst.* **20**, 1387-1424, 2019.
- 8007 Liu, J., L. Qin, J. Xia, R. W. Carlson, I. Leya, N. Dauphas, and Y. He, Cosmogenic effects on chromium isotopes in meteorites, *Geochim. Cosmochim. Acta* **251**, 73-86, 2019.
- 7958 Liu, N., R. Gallino, S. Bisterzo, A. M. Davis, R. Trappitsch, and L. R. Nittler, New constraints on the major neutron source in low-mass AGB stars, *Astrophys. J.* **865**, 112, 2018.
- 8070 Liu, N., T. Stephan, S. Cristallo, R. Gallino, P. Boehnke, L. R. Nittler, C. M. O'D. Alexander, A. M. Davis, R. Trappitsch, M. J. Pellin, and I. Dillmann, Presolar silicon carbide grains of types Y and Z: their molybdenum isotopic compositions and stellar origins, *Astrophys. J.* **881**, 28, 2019.
- 8065 Luque, R., E. Pallé, D. Kossakowski, S. Dreizler, J. Kemmer, N. Espinoza, J. Burt, G. Anglada-Escudé, V. J. S. Béjar, J. A. Caballero, K. A. Collins, K. I. Collins, M. Cortés-Contreras, E. Diez-Alonso, F. Feng, A. Hatzes, C. Hellier, T. Henning, S. V. Jeffers, L. Kaltenegger, M. Kürster, J. Madden, K. Molaverdikhani, D. Montes, N. Narita, G. Nowak, A. Ofir, M. Oshagh, H. Parviainen, A. Quirrenbach, S. Reffert, A. Reiners, C. Rodríguez-López, M. Schlecker, S. Stock, T. Trifonov, J. N. Winn, M. R. Zapatero Osorio, M. Zechmeister, P. J. Amado, D. R. Anderson, N. E. Batalha, F. F. Bauer, P. Bluhm, C. J. Burke, R. P. Butler, D. A. Caldwell, G. Chen, J. D. Crane, D. Dragomir, C. D. Dressing, S. Dynes, J. M. Jenkins, A. Kaminski, H. Klahr, T. Kotani, M. Lafarga, D. W. Latham, P. Lewin, S. McDermott, P. Montañés-Rodríguez, J. C. Morales, F. Murgas, E. Nagel, S. Pedraz, I. Ribas, G. R. Ricker, P. Rowden, S. Seager, S. A. Shectman, M. Tamura, J. Teske, J. D. Twicken, R. Vanderspeck, S. X. Wang, and B. Wohler, Planetary system around the nearby M dwarf GJ 357 including a transiting, hot, Earth-sized planet optimal for atmospheric characterization, *Astron. Astrophys.* **628**, A39, 2019.
- 7981 MacGregor, M. A., A. J. Weinberger, A. M. Hughes, D. J. Wilner, T. Currie, J. H. Debes, J. K. Donaldson, S. Redfield, A. Roberge, and G. Schneider, ALMA detection of extended millimeter halos in the HD 32297 and HD 61005 debris disks, *Astrophys. J.* **869**, 75, 2018.

- 8039 MacGregor, M. A., A. J. Weinberger, E. R. Nesvold, A. M. Hughes, D. J. Wilner, T. Currie, J. H. Debes, J. K. Donaldson, S. Redfield, A. Roberge, and G. Schneider, Multiple rings of millimeter dust emission in the HD 15115 debris disk, *Astrophys. J. Lett.* *877*, L32, 2019.
- 8078 Mannen, K., D. Roman, G. Leonard, S. Prejean, and M. Nakagawa, Special issue "Towards forecasting phreatic eruptions: examples from Hakone volcano and some global equivalents", *Earth Planets Space* *71*, 91, 2019.
- 8020 McCoy, T. J., P. N. Peplowski, F. M. McCubbin, and S. Z. Weider, The geochemical and mineralogical diversity of Mercury, in *Mercury: the View after MESSENGER*, S. C. Solomon, L. R. Nittler, and B. J. Anderson, eds., pp. 176-190, Cambridge University Press, New York, 2018.
- McFadden, J., I. Garrick-Bethell, C. K. Sim, S. S. Kim, and D. Hemingway, Iron content determines how space weathering flux variations affect lunar soils, *Icarus*, in press.
- 8084 Mikhail, S., F. M. McCubbin, F. E. Jenner, S. B. Shirey, D. Rumble, and R. Bowden, Diamondites: evidence for a distinct tectono-thermal diamond-forming event beneath the Kaapvaal craton, *Contrib. Mineral. Petrol.* *174*, 71, 2019.
- 7998 Monnier, J. D., T. J. Harries, J. Bae, B. R. Setterholm, A. Laws, A. Aarnio, F. C. Adams, S. Andrews, N. Calvet, C. Espaillat, L. Hartmann, S. Kraus, M. McClure, C. Miller, R. Oppenheimer, D. Wilner, and Z. Zhu, Multiple spiral arms in the disk around intermediate-mass binary HD 34700A, *Astrophys. J.* *872*, 122, 2019.
- 7983 Mullan, D. J., J. MacDonald, S. Dieterich, and H. Fausey, Magnetic fields on the flare star Trappist-1: consequences for radius inflation and planetary habitability, *Astrophys. J.* *869*, 149, 2018.
- 8082 Nelson, W. R., B. B. Hanan, D. W. Graham, S. B. Shirey, G. Yirgu, D. Ayalew, and T. Furman, Distinguishing plume and metasomatized lithospheric mantle contributions to post-flood basalt volcanism on the southeastern Ethiopian Plateau, *J. Petrol.* *60*, 1063-1094, 2019.
- 8050 Newcombe, M. E., J. R. Beckett, M. B. Baker, S. Newman, Y. Guan, J. M. Eiler, and E. M. Stolper, Effects of  $p\text{H}_2\text{O}$ ,  $p\text{H}_2$  and  $f\text{O}_2$  on the diffusion of H-bearing species in lunar basaltic liquid and an iron-free basaltic analog at 1 atm, *Geochim. Cosmochim. Acta* *259*, 316-343, 2019.
- 8018 Nittler, L. R., N. L. Chabot, T. L. Grove, and P. N. Peplowski, The chemical composition of Mercury, in *Mercury: the View after MESSENGER*, S. C. Solomon, L. R. Nittler, and B. J. Anderson, eds., pp. 30-51, Cambridge University Press, New York, 2018.

- 8053 Nittler, L. R., R. M. Stroud, J. M. Trigo-Rodríguez, B. T. De Gregorio, C. M. O'D. Alexander, J. Davidson, C. E. Moyano-Camero, and S. Tanbakouei, Reply to: GEMS and the devil in their details, *Nature Astron.* *3*, 606, 2019.
- 8054 Nittler, L. R., R. M. Stroud, J. M. Trigo-Rodríguez, B. T. De Gregorio, C. M. O'D. Alexander, J. Davidson, C. E. Moyano-Camero, and S. Tanbakouei, A cometary building block in a primitive asteroidal meteorite, *Nature Astron.* *3*, 659-666, 2019.
- 8006 Nittler, L. R., and S. Z. Weider, The surface composition of Mercury, *Elements* *15*, 33-38, 2019.
- 7976 O'Neil, J., R. W. Carlson, D. Papineau, E. Y. Levine, and D. Francis, The Nuvvuagittug Greenstone Belt: a glimpse of Earth's earliest crust, in *Earth's Oldest Rocks*, 2nd ed., M. J. Van Kranendonk, V. C. Bennett, and J. E. Hoffmann, eds., pp. 349-374, Elsevier, Amsterdam, 2019.
- 8055 Papineau, D., B. T. De Gregorio, J. Sagar, R. Thorogate, J. Wang, L. Nittler, D. A. Kilcoyne, H. Marbach, M. Drost, and G. Thornton, Fossil biomass preserved as graphitic carbon in a late Paleoproterozoic banded iron formation metamorphosed at more than 550°C, *J. Geol. Soc.* *176*, 651-668, 2019.
- 8035 Peters, B. J., A. Mundl-Petermeier, M. F. Horan, R. W. Carlson, and R. J. Walker, Chemical separation of tungsten and other trace elements for TIMS isotope ratio measurements using organic acids, *Geostand. Geoanal. Res.* *43*, 245-259, 2019.
- 7982 Peters, B. J., A. Shahar, R. W. Carlson, J. M. D. Day, and T. D. Mock, A sulfide perspective on iron isotope fractionation during ocean island basalt petrogenesis, *Geochim. Cosmochim. Acta* *245*, 59-78, 2019.
- 8019 Phillips, R. J., P. K. Byrne, P. B. James, E. Mazarico, G. A. Neumann, and M. E. Perry, Mercury's crust and lithosphere: structure and mechanics, in *Mercury: the View after MESSENGER*, S. C. Solomon, L. R. Nittler, and B. J. Anderson, eds., pp. 52-84, Cambridge University Press, New York, 2018.
- 8051 Qi, Y.-H., F. Wu, D. A. Ionov, I. S. Puchtel, R. W. Carlson, R. W. Nicklas, H.-M. Yu, J.-T. Kang, C.-H. Li, and F. Huang, Vanadium isotope composition of the Bulk Silicate Earth: constraints from peridotites and komatiites, *Geochim. Cosmochim. Acta* *259*, 288-301, 2019.
- 7960 Quirico, E., L. Bonal, P. Beck, C. M. O'D. Alexander, H. Yabuta, T. Nakamura, A. Nakato, L. Flandinet, G. Montagnac, P. Schmitt-Kopplin, and C. D. K. Herd, Prevalence and nature of heating processes in CM and C2-ungrouped chondrites as revealed by insoluble organic matter, *Geochim. Cosmochim. Acta* *241*, 17-37, 2018.

- 7986 Reekie, C. D. J., F. E. Jenner, D. J. Smythe, E. H. Hauri, E. S. Bullock, and H. M. Williams, Sulfide resorption during crustal ascent and degassing of oceanic plateau basalts, *Nature Commun.* *10*, 82, 2019.
- 7975 Reimink, J. R., A. M. Bauer, and T. Chacko, The Acasta Gneiss Complex, in *Earth's Oldest Rocks*, 2nd ed., M. J. Van Kranendonk, V. C. Bennett, and J. E. Hoffmann, eds., pp. 329-347, Elsevier, Amsterdam, 2019.
- 8038 Reimink, J. R., D. G. Pearson, S. B. Shirey, R. W. Carlson, and J. W. F. Ketchum, Onset of new, progressive crustal growth in the central Slave craton at 3.55 Ga, *Geochem. Perspect. Lett.* *10*, 8-13, 2019.
- 7969 Ribas, I., M. Tuomi, A. Reiners, R. P. Butler, J. C. Morales, M. Perger, S. Dreizler, C. Rodríguez-López, J. I. González Hernández, A. Rosich, F. Feng, T. Trifonov, S. S. Vogt, J. A. Caballero, A. Hatzes, E. Herrero, S. V. Jeffers, M. Lafarga, F. Murgas, R. P. Nelson, E. Rodríguez, J. B. P. Strachan, L. Tal-Or, J. Teske, B. Toledo-Padrón, M. Zechmeister, A. Quirrenbach, P. J. Amado, M. Azzaro, V. J. S. Béjar, J. R. Barnes, Z. M. Berdiñas, J. Burt, G. Coleman, M. Cortés-Contreras, J. Crane, S. G. Engle, E. F. Guinan, C. A. Haswell, Th Henning, B. Holden, J. Jenkins, H. R. A. Jones, A. Kaminski, M. Kiraga, M. Kürster, M. H. Lee, M. J. López-González, D. Montes, J. Morin, A. Ofir, E. Pallé, R. Rebolo, S. Reffert, A. Schweitzer, W. Seifert, S. A. Shtetman, D. Staab, R. A. Street, A. Suárez Mascareño, Y. Tsapras, S. X. Wang, and G. Anglada-Escudé, A candidate super-Earth planet orbiting near the snow line of Barnard's star, *Nature* *563*, 365-368, 2018.
- 7984 Richardson, C. N., N. Sime, and G. N. Wells, Scalable computation of thermomechanical turbomachinery problems, *Finite Elem. Anal. Des.* *155*, 32-42, 2019.
- Riebe, M. E. I., H. Busemann, C. M. O'D. Alexander, L. R. Nittler, C. D. K. Herd, C. Maden, J. Wang, and R. Wieler, Effects of aqueous alteration on primordial noble gases and presolar SiC in the carbonaceous chondrite Tagish Lake, *Meteorit. Planet. Sci.*, in press.
- 8073 Riedel, A. R., V. DiTomasso, E. L. Rice, M. K. Alam, E. Abrahams, J. Crook, K. L. Cruz, and J. K. Faherty, Radial velocities, space motions, and nearby young moving group memberships of eleven candidate young brown dwarfs, *Astron. J.* *157*, 247, 2019.
- 7964 Roman, D. C., and K. V. Cashman, Top-down precursory volcanic seismicity: implications for 'stealth' magma ascent and long-term eruption forecasting, *Front. Earth Sci.* *6*, 124, 2018.



- Roman, D. C., P. C. LaFemina, R. Bussard, K. Stephens, C. Wauthier, M. Higgins, M. D. Feineman, S. R. Arellano, J. M. de Moor, G. Avar, M. Martinez Cruz, M. Burton, M. Varnam, A. Saballos, M. Ibarra, W. Strauch, and V. Tenorio, Mechanisms of unrest and eruption at persistently restless volcanoes: insights from the 2015 eruption of Telica Volcano, Nicaragua, *Geochem. Geophys. Geosyst.*, in press.
- Ruscic, M., G. M. Bocchini, D. Becker, T. Meier, and P. E. van Keken, Variable spatio-temporal clustering of microseismicity in the Hellenic Subduction Zone as possible indicator for fluid migration, *Lithos*, in press.
- 8001 Sarkis, P., T. Henning, J. D. Hartman, G. Á. Bakos, R. Brahm, A. Jordán, D. Bayliss, L. Mancini, N. Espinoza, M. Rabus, Z. Csubry, W. Bhatti, K. Penev, G. Zhou, J. Bento, T. G. Tan, P. Arriagada, R. P. Butler, J. D. Crane, S. Shectman, C. G. Tinney, D. J. Wright, B. Addison, S. Durkan, V. Suc, L. A. Buchhave, M. de Val-Borro, J. Lázár, I. Papp, and P. Sári, HATS-59b,c: a transiting hot Jupiter and a cold massive giant planet around a Sun-like star, *Astron. J.* 156, 216, 2018.
- 8031 Schneider, A. C., E. L. Shkolniki, K. N. Allers, A. L. Kraus, M. C. Liu, A. J. Weinberger, and L. Flagg, ACRONYM. III. Radial velocities for 336 candidate young low-mass stars in the solar neighborhood, including 77 newly confirmed young moving group members, *Astron. J.* 157, 234, 2019.
- 8069 Sepulveda, A. G., L. Matrà, G. M. Kennedy, C. del Burgo, K. I. Öberg, D. J. Wilner, S. Marino, M. Booth, J. M. Carpenter, C. L. Davies, W. R. F. Dent, S. Ertel, J.-F. Lestrade, J. P. Marshall, J. Milli, M. C. Wyatt, M. MacGregor, and B. C. Matthews, The REASONS survey: resolved millimeter observations of a large debris disk around the nearby F star HD 170773, *Astrophys. J.* 881, 84, 2019.
- 8027 Shahar, A., P. Driscoll, A. Weinberger, and G. Cody, What makes a planet habitable? *Science* 364, 434-435, 2019.
- 7970 Sheppard, S. S., Y. R. Fernandez, and A. Moullet, The albedos, sizes, colors and satellites of dwarf planets compared with newly measured dwarf planet 2013 FY27, *Astron. J.* 156, 270, 2018.
- 8003 Sheppard, S. S., C. A. Trujillo, D. J. Tholen, and N. Kaib, A new high perihelion trans-Plutonian Inner Oort Cloud object: 2015 TG387, *Astron. J.* 157, 139, 2019.
- 7996 Sheppard, S. S., G. V. Williams, D. J. Tholen, C. A. Trujillo, M. Brozovic, A. Thirouin, M. Devoegele, D. Fohring, R. Jacobson, and N. A. Moskovitz, New Jupiter satellites and moon-moon collisions, *Res. Notes AAS* 2, 155, 2018.
- 8057 Shimizu, K., A. E. Saal, E. H. Hauri, M. R. Perfit, and R. Hékinian, Evaluating the roles of melt-rock interaction and partial degassing on the CO<sub>2</sub>/Ba ratios of MORB: implications for the CO<sub>2</sub> budget in the Earth's depleted upper mantle, *Geochim. Cosmochim. Acta* 260, 29-48, 2019.

- Shirey, S. B., K. V. Smit, D. G. Pearson, M. J. Walter, S. Aulbach, F. E. Brenker, H. Bureau, A. D. Burnham, P. Cartigny, T. Chacko, D. J. Frost, E. H. Hauri, D. E. Jacob, S. D. Jacobsen, S. C. Kohn, R. W. Luth, S. Mikhail, O. Navon, F. Nestola, P. Nimis, M. Palot, E. M. Smith, T. Stachel, V. Stagno, A. Steele, R. A. Stern, E. Thomassot, A. R. Thomson, and Y. Weiss, Diamonds and the mantle geodynamics of carbon: deep mantle carbon evolution from the diamond record, in *Deep Carbon: Past to Present*, B. N. Orcutt, I. Danielle, and R. Dasgupta, eds., Cambridge University Press, in press.
- 7973 Silverberg, S. M., M. J. Kuchner, J. P. Wisniewski, A. S. Bans, J. H. Debes, S. J. Kenyon, C. Baranec, R. Riddle, N. Law, J. K. Teske, E. Burns-Kaurin, M. K. D. Bosch, T. Cernohous, K. Doll, H. A. Durantini Luca, M. Hyogo, J. Hamilton, J. J. S. Finnemann, L. Lau, and Disk Detective Collaboration, Follow-up imaging of disk candidates from the Disk Detective citizen science project: new discoveries and false positives in *WISE* circumstellar disk surveys, *Astrophys. J.* *868*, 43, 2018.
- 7954 Sio, C. K., M. Roskosz, N. Dauphas, N. R. Bennett, T. Mock, and A. Shahar, The isotope effect for Mg-Fe interdiffusion in olivine and its dependence on crystal orientation, composition and temperature, *Geochim. Cosmochim. Acta* *239*, 463-480, 2018.
- 8079 Smit, K. V., and S. B. Shirey, How do diamonds form in the deep Earth? *Gems Gemol.* *54* (no. 4), 440-445, 2018.
- 8080 Smit, K. V., and S. B. Shirey, How old are diamonds? Are they forever? *Gems Gemol.* *55* (no. 1), 102-109, 2019.
- 8081 Smit, K. V., and S. B. Shirey, Kimberlites: Earth's diamond delivery system, *Gems Gemol.* *55* (no. 2), 270-276, 2019.
- 8016 Smit, K. V., S. B. Shirey, E. H. Hauri, and R. A. Stern, Sulfur isotopes in diamonds reveal differences in continent construction, *Science* *364*, 383-385, 2019.
- 8046 Smith, E. M., S. B. Shirey, S. H. Richardson, F. Nestola, E. S. Bullock, J. Wang, and W. Wang, Reply to: Evidence for two blue (type IIb) diamond populations, *Nature* *570*, E28-E29, 2019.
- 8017 Solomon, S. C., L. R. Nittler, and B. J. Anderson, eds., *Mercury: the View after MESSENGER*, Cambridge University Press, New York, 583 pp., 2018.
- 7997 Steele, A., L. G. Benning, R. Wirth, S. Siljeström, M. D. Fries, E. Hauri, P. G. Conrad, K. Rogers, J. Eigenbrode, A. Schreiber, A. Needham, J. H. Wang, F. M. McCubbin, D. Kilcoyne, and J. D. Rodriguez Blanco, Organic synthesis on Mars by electrochemical reduction of CO<sub>2</sub>, *Sci. Adv.* *4*, eaat5118, 2018.
- 7979 Teague, R., J. Bae, T. Birnstiel, and E. A. Bergin, Evidence for a vertical dependence on the pressure structure in AS 209, *Astrophys. J.* *868*, 113, 2018.

- 8058 Telus, M., C. M. O'D. Alexander, E. H. Hauri, and J. Wang, Calcite and dolomite formation in the CM parent body: insight from *in situ* C and O isotope analyses, *Geochim. Cosmochim. Acta* 260, 275-291, 2019.
- 7977 Teske, J. K., D. R. Ciardr, S. B. Howell, L. A. Hirsch, and R. A. Johnson, The effects of stellar companions on the observed transiting exoplanet radius distribution, *Astron. J.* 156, 292, 2018.
- 8030 Thirouin, A., and S. S. Sheppard, Light curves and rotational properties of the pristine cold classical Kuiper Belt objects, *Astron. J.* 157, 228, 2019.
- 8052 Thirouin, A., and S. S. Sheppard, Colors of trans-Neptunian contact binaries, *Astron. J.* 158, 53, 2019.
- 8014 Thompson, M. A., A. J. Weinberger, L. D. Keller, J. A. Arnold, and C. C. Stark, Studying the evolution of warm dust encircling BD+20 307 using SOFIA, *Astrophys. J.* 875, 45, 2019.
- 8071 Toledo-Padrón, B., J. I. González Hernández, C. Rodríguez-López, A. Suárez Mascareño, R. Rebolo, R. P. Butler, I. Ribas, G. Anglada-Escudé, E. N. Johnson, A. Reiners, J. A. Caballero, A. Quirrenbach, P. J. Amado, V. J. S. Béjar, J. C. Morales, M. Perger, S. V. Jeffers, S. Vogt, J. Teske, S. Shectman, J. Crane, M. Díaz, P. Arriagada, B. Holden, J. Burt, E. Rodríguez, E. Herrero, F. Murgas, E. Pallé, N. Morales, M. J. López-González, E. Díez Alonso, M. Tuomi, M. Kiraga, S. G. Engle, E. F. Guinan, J. B. P. Strachan, F. J. Aceituno, J. Aceituno, V. M. Casanova, S. Martín-Ruiz, D. Montes, J. L. Ortiz, A. Sota, J. Briol, L. Barbieri, I. Cervini, M. Deldem, F. Dubois, F.-J. Hambsch, B. Harris, C. Kotnik, L. Logie, J. Lopez, M. McNeely, Y. Ogmen, L. Pérez, S. Rau, D. Rodríguez, F. S. Urquijo, and S. Vanaverbeke, Stellar activity analysis of Barnard's Star: very slow rotation and evidence for long-term activity cycle, *Mon. Not. Roy. Astron. Soc.* 488, 5145-5161, 2019.
- 7989 Trifonov, T., S. Stock, T. Henning, S. Reffert, M. Kürster, M. H. Lee, B. Bitsch, R. P. Butler, and S. S. Vogt, Two Jovian planets around the giant star HD 202696: a growing population of packed massive planetary pairs around massive stars? *Astron. J.* 157, 93, 2019.
- 8034 Tucker, J. M., E Hauri, H., J. P. Marske, A. J. Pietruszka, M. O. Garcia, J. P. Marske, and F. A. Trusdell, A high carbon content of the Hawaiian mantle from olivine-hosted melt inclusions, *Geochim. Cosmochim. Acta* 254, 156-172, 2019.
- 7968 van Keken, P. E., I. Wada, G. A. Abers, B. R. Hacker, and K. Wang, Mafic high-pressure rocks are preferentially exhumed from warm subduction settings, *Geochem. Geophys. Geosyst.* 19, 2934-2961, 2018.

- 8075 van Keken, P. E., I. Wada, N. Sime, and G. A. Abers, Thermal structure of the forearc in subduction zones: a comparison of methodologies, *Geochem. Geophys. Geosyst.* *20*, 3268-3288, 2019.
- 8066 Verdier-Paoletti, M. J., Y. Marrocchi, L. G. Vacher, J. Gattacceca, A. Gurenko, C. Sonzogni, and M. Gounelle, Testing the genetic relationship between fluid alteration and brecciation in CM chondrites, *Meteorit. Planet. Sci.* *54*, 1692-1709, 2019.
- 7980 Wada, K., M. Grott, P. Michel, K. J. Walsh, A. M. Barucci, J. Biele, J. Blum, C. M. Ernst, J. T. Grundmann, B. Gundlach, A. Hagermann, M. Hamm, M. Jutzi, M.-J. Kim, E. Kührt, L. Le Corre, G. Libourel, R. Lichtenheldt, A. Maturilli, S. R. Messenger, T. Michikami, H. Miyamoto, S. Mottola, T. Müller, A. M. Nakamura, L. R. Nittler, K. Ogawa, T. Okada, E. Palomba, N. Sakatani, S. E. Schröder, H. Senshu, D. Takir, M. E. Zolensky, and International Regolith Science Group (IRSG) in Hayabusa2 project, Asteroid Ryugu before the Hayabusa2 encounter, *Prog. Earth Planet. Sci.* *5*, 82, 2018.
- 8044 Wagner, L. S., and E. A. Okal, The Pucallpa nest and its constraints on the geometry of the Peruvian flat slab, *Tectonophysics* *762*, 97-108, 2019.
- 8077 Wauthier, C., D. C. Roman, and M. P. Poland, Modulation of seismic activity in Kīlauea's upper East Rift Zone (Hawai'i) by summit pressurization, *Geology* *47*, 820-824, 2019.
- 8083 Wenz, M. D., S. D. Jacobsen, D. Zhang, M. Regier, H. J. Bausch, P. K. Dera, M. Rivers, P. Eng, S. B. Shirey, and D. G. Pearson, Fast identification of mineral inclusions in diamond at GSECARS using synchrotron X-ray microtomography, radiography and diffraction, *J. Synchrotron Rad.* *26*, 1763-1768, 2019.
- 7950 Yu, L., J. E. Rodriguez, J. D. Eastman, I. J. M. Crossfield, A. Shporer, B. S. Gaudi, J. Burt, B. J. Fulton, E. Sinukoff, A. W. Howard, H. Isaacson, M. R. Kosiarek, D. R. Ciardi, J. E. Schlieder, K. Penev, A. Vanderburg, K. G. Stassun, A. Bieryla, R. P. Butler, P. Berlind, M. L. Calkins, G. A. Esquerdo, D. W. Latham, G. Murawski, D. J. Stevens, E. A. Petigura, L. Kreidberg, and M. Bristow, Two warm, low-density sub-Jovian planets orbiting bright stars in *K2* Campaigns 13 and 14, *Astron. J.* *156*, 127, 2018.
- 8002 Zhu, K., J. Liu, F. Moynier, L. Qin, C. M. O'D. Alexander, and Y. He, Chromium isotopic evidence for an early formation of chondrules from the Ornans CO chondrite, *Astrophys. J.* *873*, 82, 2019.