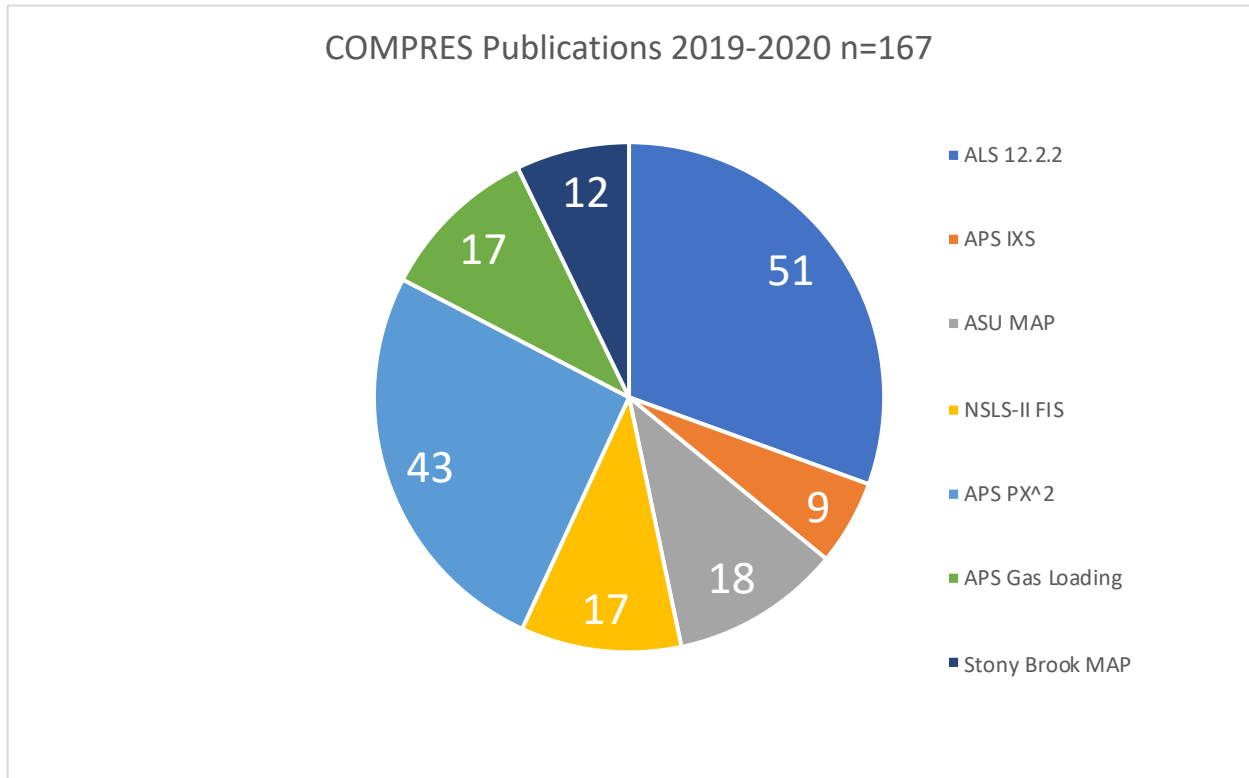


COMPRES Publications (2019-2020) total=167



Publications: 12.2.2 at ALS (51)

1. Dobrosavljevic, V. V., W. Sturhahn, and J.M. Jackson, "Evaluating the Role of Iron-Rich (Mg,Fe)O in Ultralow Velocity Zones, " *Minerals* 9 (12), 762 (2019) (<http://dx.doi.org/10.3390/min9120762>) 12.2.2
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4. Lu, Y., S. Zhu, E. Huang, Y. He, J. Ruan, G. Liu, and H. Yan, "Pressure-driven band gap engineering in ion-conducting semiconductor silver orthophosphate," *Journal of Materials Chemistry A* 7(9), 4451-4458 (2019). (doi:10.1039/C8TA10606A) 12.2.2
5. Parry, M., S. Couper, A. Mansouri Tehrani, A. O. Oliynyk, J. Brgoch, L. Miyagi, and T.D.Sparks,"Lattice strain and texture analysis of superhard Mo_{0.9}W_{1.1}BC and ReWC_{0.8} via diamond anvil cell deformation," *Journal of Materials Chemistry A* 7(41), 24012-24018 (2019) (doi:10.1039/C9TA06431A) 12.2.2
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 9. Bonmassar, N., M.F. Bekheet, L. Schlicker, A. Gili, A. Gurlo, A. Doran, Y. Gao, M. Heggen, J. Bernardi, B. Klötzer, and S. Penner, "In Situ-Determined Catalytically Active State of LaNiO₃ in Methane Dry Reforming," *ACS Catalysis* 10(2), 1102-1112 (2020). (doi:10.1021/acscatal.9b03687) 12.2.2
 10. Chen, H., K. Leinenweber, V. Prakapenka, M. Kunz, H.A. Bechtel, Z. Liu, and S.-H. Shim, "Phase transformation of hydrous ringwoodite to the lower-mantle phases and the formation of dense hydrous silica," *American Mineralogist* 105(9), 1342-1348 (2020). (doi:10.2138/am-2020-7261) 12.2.2,1.4
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19. Karl, D., F. Kamutzki, P. Lima, A. Gili, T. Duminy, A. Zocca, J. Günster, and A. Gurlo, "Sintering of ceramics for clay in situ resource utilization on Mars," *Open Ceramics*, 100008 (2020). (doi:10.1016/j.oceram.2020.100008) 12.2.2 [NOT YET CONFIRMED BY THE ALS]
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 23. Ko, B., V. Prakapenka, M. Kunz, C. Prescher, K. Leinenweber, and S.-H. Shim, "Mineralogy and density of Archean volcanic crust in the mantle transition zone," *Physics of the Earth and Planetary Interiors* 305, 106490 (2020). (doi:10.1016/j.pepi.2020.106490) 12.2.2
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 28. Li, J., W. Zhang, and P.M. Monteiro, "Mechanical properties of struvite-K: A high-pressure X-ray diffraction study," *Cement and Concrete Research* 136, 106171 (2020). (doi:10.1016/j.cemconres.2020.106171) 12.2.2
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- Physical Chemistry Letters 11(15), 6150-6155 (2020). (doi:10.1021/acs.jpcllett.0c01810) 7.3.3,12.2.2
43. Ploner, K., M. Watschinger, P.D. Kheyrollahi Nezhad, T. Götsch, L. Schlicker, E.-M. Köck, A. Gurlo, A. Gili, A. Doran, L. Zhang, N. Köwitsch, M. Armbrüster, S. Vanicek, W. Wallisch, C. Thurner, B. Klötzer, and S. Penner, "Mechanistic insights into the catalytic methanol steam reforming performance of Cu/ZrO₂ catalysts by in situ and operando studies," *Journal of Catalysis* 391, 497-512 (2020). (doi:10.1016/j.jcat.2020.09.018) 12.2.2
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 46. Xu, J., T. Huang, H. Dong, D. Tan, Z. Feng, T. Wei, R.A. Susilo, Y. Wang, H. Wang, M. Yuan, L. Zhang, S. Wan, Y. Huang, T. Lu, Y. Chen, Z. Chen, and B. Chen, "Structural and mechanical properties of magnesium aluminate nanoceramics under high pressure," *Applied Physics Letters* 117(4), 041901 (2020). (doi:10.1063/5.0010180) 12.2.2
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Dissertations (4)

1. Gili, A., "High-temperature separation and activation of carbon dioxide by dual-phase membranes and nickel catalysts," Doctoral Dissertation, Technische Universität Berlin, Berlin, Germany, 2020, advisor Aleksander Gurlo. (doi:10.14279/depositonce-9437)

12.2.2

2. Ko, B., "The Mineralogy and Chemical Evolution of the Earth's Deep Mantle," Doctoral Dissertation, Arizona State University, Tempe, Arizona, 2020, advisor Sang-Heon Shim. 12.2.2
3. Ott, J., "Metastability of Tremolite at High Pressures and Temperatures," Doctoral Dissertation, University of California, Santa Cruz, Santa Cruz, CA, 2020, advisor Q. Williams. 12.2.2
4. Zhu, W., "Rheology and Relaxation in As-Se Glass-Forming Liquids," Doctoral Dissertation, University of California, Davis, Davis, California, USA, 2020, advisor S. Sen. 12.2.2

Publications: IXS at Extreme Pressure and Temperature at 3-ID and 30-ID at APS (9)

1. Susannah M. Dorfman, Vasily Potapkin, Mingda Lv, Eran Greenberg, Ilya Kupenko, Aleksandr I. Chumakov, Wenli Bi, E. Ercan Alp, Jiachao Liu, Arnaud Magrez, Siân E. Dutton, Robert J. Cava, Catherine A. McCammon, Philippe Gillet, "Effects of composition and pressure on electronic states of iron in bridgmanite," *Am. Mineral.* 105 (7), 1030-1039 (2020). DOI: 10.2138/am-2020-7309
2. Ryan A. Klein, James P. S. Walsh, Samantha M. Clarke, Zhenxian Liu, E. Ercan Alp, Wenli Bi, Yue Meng, Alison B. Altman, Paul Chow, Yuming Xiao, M. R. Norman, James M. Rondinelli, Steven D. Jacobsen, Danilo Puggioni, Danna E. Freedman, "Pressure-Induced Collapse of Magnetic Order in Jarosite," *Phys. Rev. Lett.* 125 (7), 077202 (2020). DOI: 10.1103/PhysRevLett.125.077202
3. Xiaojing Lai, Feng Zhu, Yingxin Liu, Wenli Bi, Jiyong Zhao, E. Ercan Alp, Michael Y. Hu, Dongzhou Zhang, Sergey Tkachev, Murli H. Manghnani, Vitali B. Prakapenka, Bin Chen, "Elastic and magnetic properties of Fe₃P up to core pressures: Phosphorus in the Earth's core," *Earth Planet. Sci. Lett.* 531, 115974-1-115974 (2020). DOI: 10.1016/j.epsl.2019.115974
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6. Vasilije V. Dobrosavljevic, Wolfgang Sturhahn, Jennifer M. Jackson, "Evaluating the Role of Iron-Rich (Mg,Fe)O in Ultralow Velocity Zones" *Minerals-Basel* 9, 762-1 - 762-12 (2019) DOI: 10.3390/min9120762.
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Publications: Multi-Anvil Cell Assembly Development ASU (18)

1. Chen, H.W.; Leinenweber, K.; Prakapenka, V.; Kunz, M.; Bechtel, H.A.; Liu, Z.X.; Shim, S.H. (2020) Phase transformation of hydrous ringwoodite to the lower-mantle phases and the formation of dense hydrous silica. *American Mineralogist* 105, 1342-1348.
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