

# GRETHER HYSTAD

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## PUBLICATIONS

6. Hazen, R. M., Grew, E. S., Downs, R. T., Golden, J., Hystad, G., and Sverjensky, D. A. (2014). Mineral Ecology: Chance and Necessity in the Mineral Diversity of Terrestrial Planets. *Canadian Mineralogist*. Accepted. INVITED.
5. Hazen, R. M., Liu, X. M., Downs, R. T., Golden, J., Pires, A. J., Grew, E. S., Hystad, G., Estrada, C., and Sverjensky, D. A. (2014). Mineral Evolution: Episodic Metallogenesis, the Supercontinent Cycle, and the Coevolving Geosphere and Biosphere. *Society of Economic Geologists Special Publication*, 18, 1-15. INVITED. [http://www.geo.arizona.edu/xtal/group/pdf/SEGSP18\\_1.pdf](http://www.geo.arizona.edu/xtal/group/pdf/SEGSP18_1.pdf)
4. Golden, J., McMillan, M., Downs, R. T., Hystad, G., Goldstein, I., Stein, H. J., Zimmerman, A., Sverjensky, D. A., Armstrong, J. T., and Hazen, R. M. (2013). Rhenium variations in molybdenite (MoS<sub>2</sub>): Evidence for progressive subsurface oxidation. *Earth and Planetary Science Letters*, 366: 1-5. [http://www.geo.arizona.edu/xtal/group/pdf/EPSSL366\\_1.pdf](http://www.geo.arizona.edu/xtal/group/pdf/EPSSL366_1.pdf)
3. Hazen, R. M., Golden, J., Downs, R. T., Hystad, G., Grew, E. S., Azzolini, D., and Sverjensky, D. A. (2012). Mercury (Hg) mineral evolution: A mineralogical record of supercontinent assembly, changing ocean geochemistry, and the emerging terrestrial biosphere. *American Mineralogist*, 97: 1013-1042. [http://www.geo.arizona.edu/xtal/group/pdf/AM97\\_1013.pdf](http://www.geo.arizona.edu/xtal/group/pdf/AM97_1013.pdf)
2. Hystad, G. (2011). Periodic Ising Correlations. *Journal of Mathematical Physics*, 52, Issue 1, 013302. <http://arxiv.org/abs/1011.2223>
1. Palmer, J. and Hystad, G. (2010). Spin matrix for the scaled periodic Ising model. *Journal of Mathematical Physics*, 51, Issue 12, 123301. <http://arxiv.org/abs/1008.0352>

## IN PREPARATION/SUBMITTED PAPERS

3. Hystad, G., Downs, R. T., and Hazen, R. M. (2014). Mineral frequency distribution data conform to a LNRE model: Prediction of Earth's "missing" minerals. In review.
2. Hystad, G., Downs, R. T., Grew E. S., and Hazen, R. M. (2014). The search for "Earth-like" planets: Earth is mineralogically unique. In preparation.
1. Hazen, R. M., Grew E. S., Downs, R. T., and Hystad, G. (2014). The "missing" minerals of beryllium. In preparation.