

Xinbo Yang

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EDUCATION

University of Kentucky	Mining Engineering	Ph.D.	2019
Southern Illinois University Carbondale	Mining Engineering	M.S.	2014
China University of Mining & Technology	Mineral Processing Engineering	B.E.	2011

PROFESSIONAL EXPERIENCE

2020-present	Assistant Research Professor Department of Mining Engineering, University of Kentucky, Lexington, Kentucky
2019-2020	Postdoc Research Fellow Department of Mining Engineering, University of Kentucky, Lexington, Kentucky
2015-2019	Research Assistant Department of Mining Engineering, University of Kentucky, Lexington, Kentucky
2012-2015	Research Assistant Department of Mining Engineering, Southern Illinois University, Carbondale, Illinois

RESEARCH INTEREST

Mineral Processing, Hydrometallurgy, Rare earth element and critical material extraction and purification, Mineral resources sustainability, Solution chemistry, Froth flotation.

SELECTED PUBLICATIONS

1. Yang, X. and Honaker, R., 2020. Leaching Kinetics of Rare Earth Elements from Fire Clay Seam Coal. *Minerals*, 10(6), p.491.
2. Zhang, W., Noble, A., Yang, X. and Honaker, R., 2020. A Comprehensive Review of Rare Earth Elements Recovery from Coal-Related Materials. *Minerals* 10.5 (2020): 451.
3. Yang, X., Zhang, W. and Honaker, R.Q., 2020. "Production of High Purity Rare Earth Oxide from Bituminous Coal-Based Sources using a Multi-Stage Selective Precipitate Circuit" 2020 SME Annual Conference. Phoenix, AZ, 2020.
4. Zhang, W., Noble, A., Yang, X. and Honaker, R., 2020. Lithium leaching recovery and mechanisms from density fractions of an Illinois Basin bituminous coal. *Fuel*, 268(C).

5. R. Honaker, J. Werner, X. Yang, A. Chandra, W. Zhang, and A. Noble, 2020. Pilot Plant Evaluations of Rare Earth Element Recovery and Concentration Efforts from Pre-Combustion Bituminous Coal Sources. Submitted to Conference of Metallurgists, August 24-27, 2020, Canada.
6. Yang, X., Werner, J. and Honaker, R.Q., 2019. Leaching of rare Earth elements from an Illinois basin coal source. *Journal of Rare Earths*, 37(3), pp.312-321.
7. Yang, X., Tang, H., Werner, J., and Honaker, R.Q., 2019. "Investigation into recovery of rare earth elements from Dotiki coal plant coarse refuse by heap leaching" 2019 SME Annual Conference. Denver, CO, 2019.
8. Huang, Q., Yang, X. and Honaker, R.Q., 2019. Evaluation of Frother Types for Improved Flotation Recovery and Selectivity. *Minerals*, 9(10), p.590.
9. Honaker, R.Q., Zhang, W., and Yang, X. "Conception of an integrated flowsheet for rare earth elements recovery from coal coarse refuse," *Minerals Engineering*. Vol. 122. 233-240, 2018.
10. Zhang, W., Yang, X., and Honaker, R.Q. "Association characteristic study and preliminary recovery investigation of rare earth elements from Fire Clay seam coal middlings." *Fuel*. 215. 551-560, 2018.
11. Honaker R., Yang X., Chandra A., Zhang W., and Werner J. Hydrometallurgical Extraction of Rare Earth Elements from Coal: Proceedings of the First Global Conference on Extractive Metallurgy. Extraction 2018. January 2018.

SYNERGISTIC ACTIVITIES

1. Professional membership: Society for Mining, Metallurgy and Exploration (SME)
2. Evaluation of manuscripts for journals: *Minerals*, *Mining*, *Metallurgy & Exploration*; *International Journal of Coal Preparation and Utilization*; *Minerals*; *Energies*; *Metals*.
3. Honors/Awards: SME Rong Yu Wan PhD. Dissertation Award (2020), UK Mining Outstanding Graduate Student (2019); SME MPD Award (2017), SME WAAIME Scholarship (2016-2018); EPA P3 Award (2012).
4. U.S. Department of Energy: Co-PI, Pilot-Scale Testing of an Integrated Circuit for the Extraction of Rare Earth Minerals and Elements from Coal and Coal Byproducts using Advanced Separation Technologies, \$ 7,334,599.
5. U.S. Department of Energy: Co-PI, Demonstration of Scaled-Production of Rare Earth Oxides and Critical Materials from Coal-Based Sources Using Innovative, Low-Cost Process Technologies and Circuits, \$5,218,500.