



Profile

2004-2008: PhD of Chemical Engineering, State Key Lab of Chemical Reaction Engineering, East China University of Science & Technology

2008-2011: Lecturer, School of Resources and Environmental Engineering, East China University of Science & Technology

2011-present: Associate Professor, School of Resources and Environmental Engineering, East China University of Science & Technology

2017-2018: Visiting scholar, School of Chemical and Biomolecular Engineering, University of Sydney

Research Field

- (1) Recycling valuable metals from E-wastes
- (2) Recovery of lithium resource
- (3) Synthesis and separation process of adsorption functional materials

Research results and selected published papers

- (1) Shu-Ying Sun, Xiao-Yao Nie, Jun Huang, Jian-Guo Yu. Molecular simulation of diffusion behavior of counterions within polyelectrolyte membranes used in electrodialysis. *Journal of Membrane Science*, 2020, 595, 117528
- (2) Dong-Fan Liu, Shu-Ying Sun*, Jian-Guo Yu. A new high-efficiency process for Li⁺ recovery from solutions based on LiMn₂O₄/λ-MnO₂ materials. *Chemical Engineering Journal*, 2019, 377: 119825.
- (3) Dong-Fan Liu, Shu-Ying Sun*, Jian-Guo Yu. Electrochemical and adsorption behavior of Li⁺, Na⁺, K⁺, Ca²⁺, and Mg²⁺ in LiMn₂O₄/λ-MnO₂ structures. *The Canadian Journal of Chemical Engineering*, 2019, 97: 1589-1595.
- (4) Dong-Fan Liu, Shu-Ying Sun*, Jian-Guo Yu. Li₄Mn₅O₁₂ Desorption Process with Acetic Acid and Mn Dissolution Mechanism. *Journal of Chemical Engineering of Japan*, 2019, 52(3): 274-279
- (5) Li-Po He, Shu-Ying Sun*, Yu Jian-Guo. Performance of LiNi_{1/3}Co_{1/3}Mn_{1/3}O₂ prepared from spent lithium-ion batteries by a carbonate co-precipitation method. *Ceramics International*, 2018, 44 (1): 351-357.
- (6) Li-Po He, Shu-Ying Sun*, Yu Jian-Guo. Recovery of lithium, nickel, cobalt, and manganese from spent lithium-ion batteries using L-tartaric acid as a leachant. *ACS Sustainable Chemistry & Engineering*, 2017, 5(1): 714-721.
- (7) Li-Po He, Shu-Ying Sun*, Yu Jian-Guo. Leaching process for recovering valuable metals from the LiNi_{1/3}Co_{1/3}Mn_{1/3}O₂ cathode of lithium-ion batteries. *Waste Management*, 2017, 64: 171-181.
- (8) Xiao-Yao Nie, Shu-Ying Sun*, Xingfu Song, Jian-Guo Yu. Further investigation into lithium recovery from salt lake brines with different feed characteristics by electrodialysis. *Journal of Membrane Science*, 2017, 530: 185-191.
- (9) Xiao-Yao Nie, Shu-Ying Sun*, Ze Sun, Xingfu Song, Jian-Guo Yu. Ion-fractionation of lithium ions from magnesium ions by electrodialysis using monovalent selective ion-exchange membranes. *Desalination*, 2017, 403: 128-135.
- (10) Jiali Xiao, Shu-Ying Sun, Xingfu Song, Ping Li, Jianguo Yu. Lithium ion recovery from brine using granulated polyacrylamide-MnO₂ ion-sieve. *Chemical Engineering Journal*, 2015, 279: 659-666
- (11) Li-Po He, Shu-Ying Sun, Yu Jian-Guo. Recovery of cathode materials and Al from spent lithium-ion batteries by ultrasonic cleaning. *Waste Management*, 2015, 46: 523-528.
- (12) Jiali Xiao, Xiaoyao Nie, Shu-Ying Sun*, Xingfu Song, Ping Li, Jianguo Yu. Lithium ion adsorption-desorption properties on spinel Li₄Mn₅O₁₂ and pH-dependent ion-exchange model. *Advanced Powder Technology*, 2015, 26: 589-594
- (13) Shu-Ying Sun, Li-Juan Cai, Xiao-Yao Nie, Xingfu Song, Jian-Guo Yu. Separation of magnesium and lithium from brine using a Desalnanofiltration membrane. *Journal of Water Process Engineering*, 2015, 7: 210-217