



Department: School of Chemical Engineering
Professional field: Chemical Engineering and Technology
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Profile

Education background

1991-1995: Bachelor, major in chemical technology, East China University of science and technology
1995-1998: Master, chemical engineering, East China University of science and technology
2002-2008: doctor, chemical engineering, East China University of science and technology

Work experience

1998.9-2000.8: Assistant Professor, School of resources and environmental engineering, East China University of science and technology
2000.9-2006.8: Lecturer, School of resources and environmental engineering, East China University of science and technology
2006.9-2011.8: Associate Professor, School of resources and environmental engineering, East China University of science and technology

Research Field

1. Development of crystallization process technology

Process control of crystallization process; development and amplification of large-scale industrial crystallizer; preparation of functional inorganic (salt) materials: including preparation of magnesium carbonate whisker and calcium sulfate whisker;

2. Efficient utilization of complex co (associated) mineral resources

Development of advanced reaction separation technologies, such as reaction crystallization coupling, liquid-solid flotation, liquid-solid swirling flow, field strengthening, etc.; development of environmental friendly symbiosis and associated resources chemical process classification utilization and engineering amplification

3. High added value resource utilization of large industrial wastes

This paper studies the environmental chemical engineering problems in the construction of circular economy industrial chain, such as salt chemical industry, phosphorus chemical industry, titanium chemical industry, coal chemical industry, etc., including the absorption and efficient utilization technology of large solid wastes such as potash processing tailings, salt chemical waste residue, phosphogypsum, etc.; classified resource utilization of high salt wastewater

Research results and selected published papers

1. Chunhua Dong, Xingfu Song, Evert Jan Meijer, Jianguo Yu, et al. Selecting Solvents for Intensification of Thermal Dissociation of Tri-n-octylamine Hydrochloride by Calculating Infrared Spectra from Ab Initio Molecular Dynamics. Chemical Engineering Journal, 2019.
2. Fan Hao, Song Xingfu, Liu Tianjie, et al. Effect of Al^{3+} on crystal morphology and size of calcium sulfate hemihydrate: Experimental and molecular dynamics simulation study. Journal of Crystal Growth, 2018, 495: 29-36
3. Chunhua Dong, Xingfu Song, Jianguo Yu, et al. Impurity Ions Effect on CO_2 Mineralization via Coupled Reaction-Extraction-Crystallization Process of $CaCl_2$ Waste Liquids. Journal of CO_2 Utilization, 2018, 27, 115-128.
4. Bian Chao, Chen Hang, Song Xingfu, et al. Stable Phase Equilibria of the Quaternary System $Na^+//Cl^-$, NO_3^- , SO_4^{2-} - H_2O at 353.15 K. JOURNAL OF CHEMICAL AND ENGINEERING DATA. 2018, 63(9): 3305-3314
5. Chunhua Dong, Xingfu Song, Jianguo Yu, et al. Insight into Thermal Dissociation of Tri-n-octylamine Hydrochloride: The Key to Realizing CO_2 Mineralization with Waste Calcium/Magnesium Chloride Liquids. Energy Science and Engineering, 2018, 6(5): 437-447.
6. Guilan Chen, Xingfu Song, Chunhua Dong, Jianguo Yu, et al. Mineralizing CO_2 as $MgCO_3 \cdot 3H_2O$ using abandoned $MgCl_2$ based on a coupled reaction- Reaction alcohol precipitation process. Energy & Fuels, 2016, 30(9): 7551-7559.
7. Chunhua Dong, Xingfu Song, Jianguo Yu, et al. Mechanism studies on thermal dissociation of tri-n-octylamine hydrochloride with FTIR, TG, DSC and quantum chemical methods. Journal of Chemical Sciences, 2017, 129(9): 1431-1440.
8. Hang Chen, Ze Sun n, Xingfu Song, Jianguo Yu. A pseudo-3D model with 3D accuracy and 2D cost for the CFD-PBM simulation of a pilot-scale rotating disc contactor, Chemical Engineering Science, 2016, 139: 27-40
9. Xiulong Mao, Xingfu Song, Guimin Lu, Yanxia Xu, Yuzhu Sun, Jianguo Yu. Effect of additives on the morphology of calcium sulfate hemihydrate: Experimental and molecular dynamics simulation studies. Chemical Engineering Journal. 2015, 278: 320-327
10. Kefeng Tong, Xingfu Song, Guoping Xiao, and Jianguo Yu. Improvement in Salt-Tolerance of Aqueous Magnesium Hydroxide Suspensions by Comb-Like Polyelectrolyte, Ind. Eng. Chem. Res. 2015, 54, 6115-6122