

Yanfu Wei

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Academic Qualification

Ph.D. in Environmental Science and Engineering, South China University of Technology

MSc in Environmental Engineering, Kunming University of Science and Technology

BSc in Environmental Engineering, Kunming University of Science and Technology

Research & Teaching Area

Environmental mineralogy, nutrient cycling in aquatic environments, eutrophication control, carbon sequestration in the ocean, biofuels.

Research Projects

- NSFC-INSF, Study on the methods and mechanisms of design of nanotubular halloysite-bimetallic nanohybrid materials for high-efficiency catalytic synthesis of furan-based biofuels, 2022.01-2024.12, PI of sub-project 3.
- NSFC, Phosphorus fixation mechanism of phosphorus-containing vivianite formation and its formation control in Dianchi Lake sediments, 2021.01~2024.12, PI.
- NSFC, Interlayer DOM characteristics, microstructural variation and intercalation mechanisms of clay minerals in lake sediments, 2017.01~2019.12, PI.
- NSFC, A study on the coupling interactions of the ferrous reactivities on mineral surfaces with the environmental purification of arsenic contaminated soils, 2021.01~2024.12, Participation
- NSFC, Mechanistic study of solvent-free nano fluidization of the nanoscale tubular minerals halloysite and imagoite, 2017.1~2020.1, Participation

Working Experience

- Assistant Professor, Macau University of Science and Technology (MUST) (Jan 2022 -);
- Lecturer, Environmental School, South China Normal University (Sep 2018- Sep 2021);
- Postdoc, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences. (Nov 2015- Aug 2018).

Academic Publications (selected)

Journal Papers

1. Zhong Xue Min, Yuan Peng*, **Wei Yanfu***, Liu Dong, Losic Dusan, Li Mengyuan, Coupling Natural Halloysite Nanotubes and Bimetallic Pt-Au Alloy Nanoparticles for Highly Efficient and Selective Oxidation of 5-Hydroxymethylfurfural to 2, 5-Furandicarboxylic Acid. *ACS Applied Materials & Interfaces*, 2022, 14, 3, 3949–3960.
2. **Wei Yanfu***, Guo Kexin, Wu Honghai*, Yuan Peng, Liu Dong, Du Peixin, Chen Pengcheng, Wei Longmeng, Chen Wei, Highly regenerative and efficient adsorption of phosphate by restructuring natural palygorskite clay via alkaline activation and co-calcination. *Chemical Communications*, 2021, 57(13):1639–1642.
3. Lu Pengcheng, Wu Honghai*, Liang Changjin, **Wei Yanfu***, Song Zhenhao, New design for titanium-pillared montmorillonite composites as efficient heterogeneous catalysts to enhance Fe (II) reductivity for 2-nitrophenol removal. *Applied Clay Science*, 2021, 205, 106052.
4. **Wei Yanfu*** Liang Xujun, Wu Honghai, Cen Jiemin, Ji Yangmei, Efficient phosphate removal by dendrite-like halloysite-zinc oxide nanocomposites prepared via noncovalent hybridization. *Applied Clay Science*, 2021, 213, 106232.
5. Wei Longmeng, Bu Hongling, **Wei Yanfu***, Wang Gehui, Chen Pengcheng, Li Hongmei, Fractionation of natural algal organic matter and its preservation on the surfaces of clay minerals, *Applied Clay Science*, 2021, 213, 106235.
6. **Wei Yanfu***, Song Zhenhao, Wu Honghai*, Titanium-pillared montmorillonite composite as an efficient catalyst for 2-nitrophenol reductive transformation by Fe(II): The effects of aqueous chemistry and mechanistic insights. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 2021, 627, 127243.
7. Chen Pengcheng, **Wei Yanfu***, Wei Longmeng, Wu Honghai, Bu Hongling, Wang Gehui, Wang Shihan, Quantitative assessments of organic matter uncoupling from clay surfaces in presence of salinity, *Applied Clay Science*, 2020, 188: 105532.
8. **Wei Yanfu**, Yuan Peng*, Liu Dong, Losic Dusan, Tan Daoyong, Chen Fanrong, Liu Hongchang, Zhou Junming, Du Peixin, Song Yaran, Activation of natural halloysite nanotubes by introducing lanthanum oxycarbonate nanoparticles via co-calcination for outstanding phosphate removal, *Chemical Communications*, 2019, 55(14): 2110-2113.
9. **Wei Yanfu**, Yuan Peng*, Song Yaran, Liu Dong, Losic Dusan, Tan Daoyong, Chen Fanrong, Liu Hongchang, Du Peixin, Zhou Junming, Activating 2D nano-kaolinite using hybrid nanoparticles for enhanced phosphate capture, *Chemical Communications*, 2018, 54(82): 11649-11652.
10. **Wei Yanfu**, Liang Xujun, Guo Chuling*, Dang Zhi*, Competitive partitioning of phenanthrene in carbon nanomaterials and anionic and nonionic micelles, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 2018, 553: 612-617.

11. **Wei Yanfu**, Liang Xujun, Lin Weijia, Guo Chuling*, Dang Zhi*, Clay mineral dependent desorption of pyrene from soils by single and mixed anionic–nonionic surfactants, *Chemical Engineering Journal*, 2015, 264: 807-814.
12. **Wei Yanfu**, Liang Xujun, Tong Le, Guo Chuling, Dang Zhi, Enhanced solubilization and desorption of pyrene from soils by saline anionic–nonionic surfactant systems, *Colloids and Surfaces A:Physicochemical and Engineering Aspects*, 2015, 468:211-218.
13. Huang Xiaofeng, Zhou Tao, Qin Yangsong, Gao Kunyang, **Wei Yanfu***, Synthesis of tetrakis (hydroxymethyl) phosphonium chloride by high-concentration phosphine in industrial off-gas, *Water Science and Technology*, 2013, 68(2):342-347.
14. Mai Zitian, **Wei Yanfu***, Progress of metal oxides and their hydroxides in removing phosphorus from water, *Guangzhou Chemical Industry*, 2021, 14(49):20-21.
15. **Wei Yanfu**, Huang xiaofeng, Tan Juan, Wang xiaoni, Gao Kunyang, Zhou Tao, Qin Yangsong, Research progress of phosphine in industrial waste gas, *Materials Reports*, 2011,(S2):415-417+428.

Patents

1. Yuan Peng, **Wei Yanfu**, Deng Liangliang, Liu Dong, Chen Fanrong, A lanthanum oxycarbonate-erolite composite material and its preparation method and application, 2019.10.22, CN108380175B.
2. Huang Xiaofeng, **Wei Yanfu**, Ning Ping, Fang Yingying, Pu Hongping, Zhou Tao, Qin Yangsong, A process for the preparation of tetrahydroxymethyl phosphonium chloride by copper chloride catalysis of phosphine, 2015.6.3, CN201210395802.8.

Conference

1. Mechanistic study on the activation of typical 1:1 type clay minerals by lanthanide-based nanoparticles for phosphate adsorption in water, 2019 Users' Annual Academic Conference and Expert Meeting of Beijing Synchrotron Radiation Facility, Session: Diffraction, Scattering and Medium Energy Spectroscopy Society, Dongguan, 2019.8.14-16. Oral Presentations.
2. Phenanthrene distribution between carbon nanomaterials and an aqueous phase in the presence of surfactant, The 3rd Asian Clay Conference, Session: Clay and Environment, Guangzhou, 2016.11.18-20. Oral Presentations.
3. Yuan Peng*, **Wei Yanfu**, Liu Dong, Liu Hongchang, Zhou Junming, Du Peixin, Song Yaran, Activation of Halloysite and Kaolinite by Introducing Lanthanum Oxycarbonate Nanoparticles via Co-calcination for Efficient Phosphate Removal, 2019 Euroclay Conference, Paris, 5 July 2019.
4. Yuan Peng*, **Wei Yanfu**, Liu Dong, Liu Hongchang, Du Peixin, Zhou Junming, Co-calcination activation of structured aluminum in halloysite and kaolinite for adsorption reactions, The 17th Annual Meeting of the Chinese Society of Mineral and Rock Geochemistry, Hangzhou, China, 2019.4.19-22.

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