

# Environmental Science Water Research & Technology

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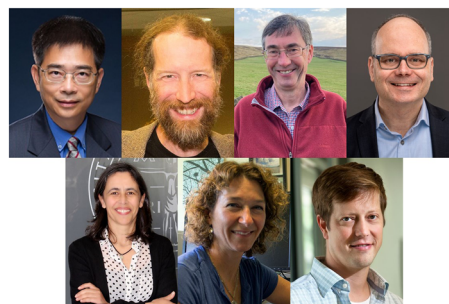
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## EDITORIAL

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### Best Papers from 2022 published in the *Environmental Science* journals of the Royal Society of Chemistry

Zongwei Cai, Neil Donahue, Kevin C. Jones,  
Kristopher McNeill, Célia Manaia, Paige J. Novak  
and Peter J. Vikesland

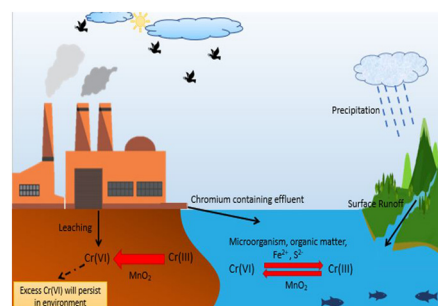


## CRITICAL REVIEW

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### A review on environmental chemodynamics, isothermal, kinetics, and thermodynamics modeling for the adsorptive removal of Cr(VI) from the industrial effluent using magnetic nanoparticles as a bio-sorbent

Rekah Nadarajah, Md. Sohrab Hossain,\*  
Md Bazlul Mobin Siddique, Md. Azharul Arafath,  
Mu. Naushad, Jun Wei Lim, Adel Al-Gheethi  
and Harlina Ahmad\*



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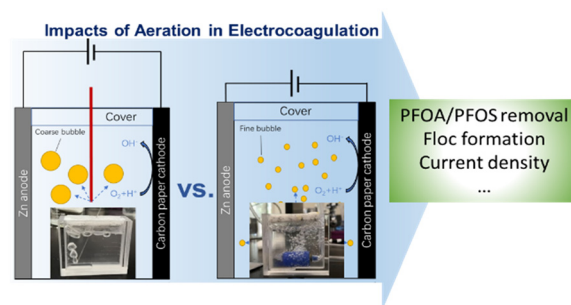
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### Emerging investigator series: impacts of aeration flow rates and bubble sizes on PFOA/PFOS removal in electrocoagulation

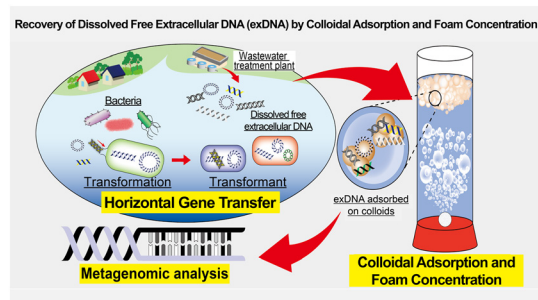
Tianhong Mu and Kyoung-Yeol Kim\*



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### Highly sensitive detection and quantification of dissolved free extracellular DNA using colloid adsorption and foam concentration

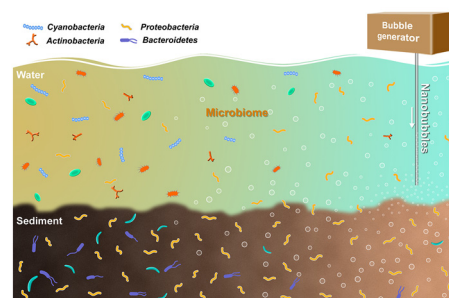
Soichiro Tamai, Yoshitoshi Ogura, Miki Okuno, Kei Nukazawa and Yoshihiro Suzuki\*



1804

### Nanobubbles can modulate microbial communities and sedimentary ecosystem during the treatment of pond water

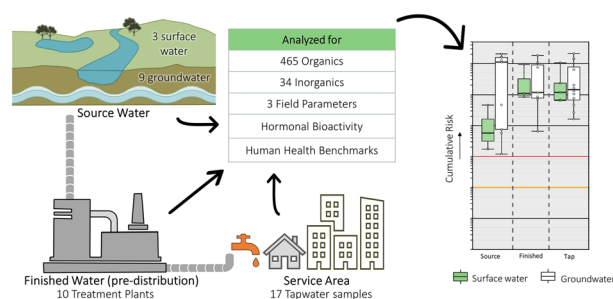
Yadi Wang, Jin Zheng, Jie Cheng, Runlong Zhou, Xueling Li,\* Jun Hu and Junhong Lü\*



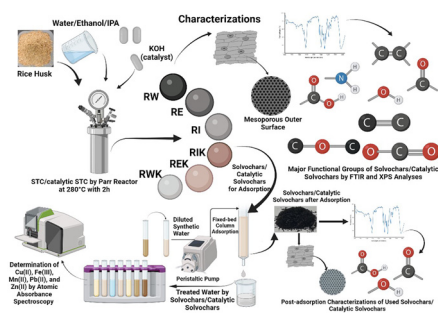
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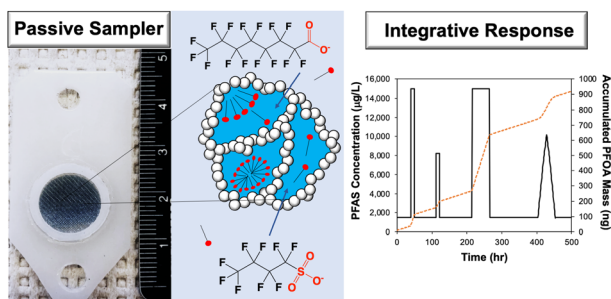
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Nazia Hossain,\* Sabzoi Nizamuddin and Kalpit Shah

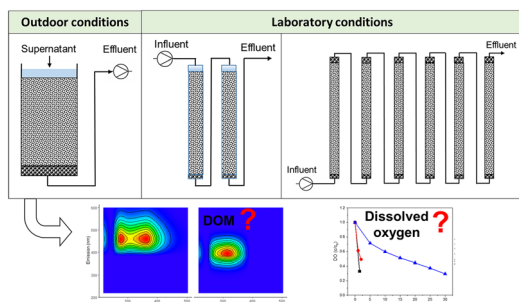
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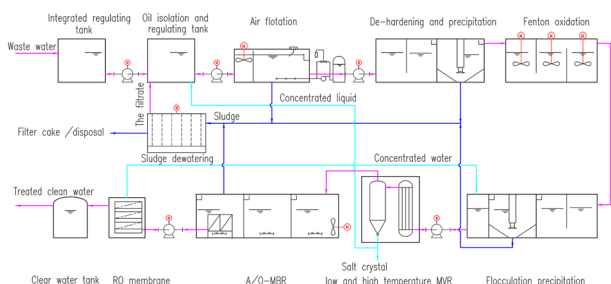
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Hongmei Yang, Wenfeng Huang and Ping Yang\*



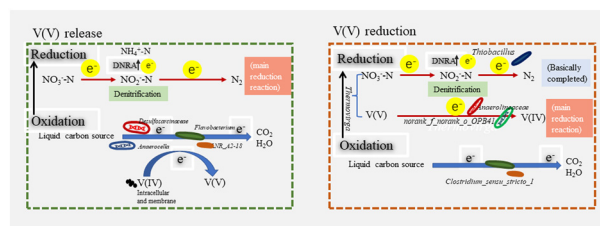


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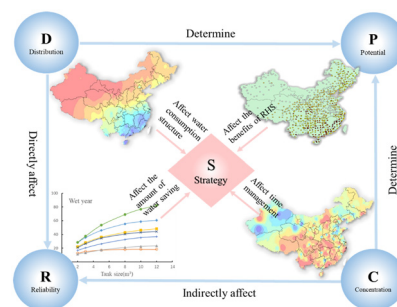
Haishuang Wang, Nan Chen,\* Chuanping Feng, Yang Deng and Wang Lu



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## Comprehensive evaluation of rainwater utilization in China: potential, feasibility and strategy

Chen Zhang, Jianghua Yu\* and Chang Ling

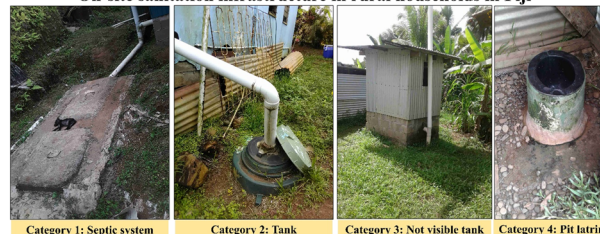


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## Understanding on-site sanitation in rural Fiji: where definitions of sanitation back-ends differ

Nabeela Nasim,\* Shylett Anthony, Thompson Daurewa, Sikeli Gavidu, Pierre Horwitz, Aaron Jenkins, Stacy Jupiter, Shuang Liu, Kinikoto Mailautoka, Sangeeta Mangubhai, Kelera Naivalu, Timoci Naivalulevu, Vilisi Naivalulevu, Sikeli Naucunivanua, Joel Negin, Mereia Ravoka, Andrew Tukana, Donald Wilson and Jacqueline Thomas

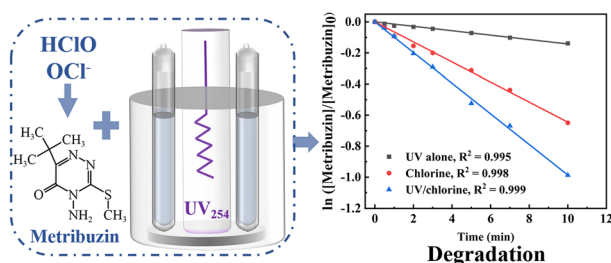
On-site sanitation infrastructure in rural households in Fiji



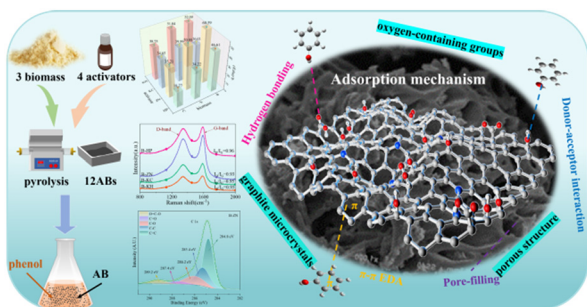
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## Degradation of metribuzin in the UV/chlorine process: kinetic model, degradation by-products and transformation pathways

Chen-Yan Hu, Dan-Dan Huang, Yi-Li Lin,\* Qiang-Bing Wang, Ling Xu, Zi-Yi Dong, Yi-Hui Wu and Sheng-Jie Ji



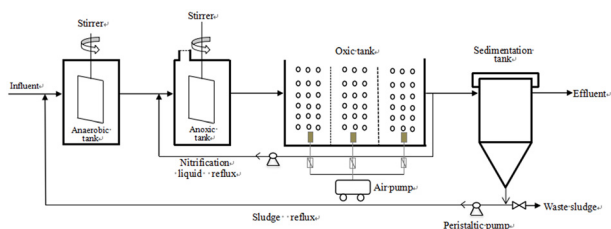
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### Coupling behavior and enhancement mechanism of porous structure, graphite microcrystals, and oxygen-containing groups of activated biochar for the adsorption of phenol

Jiamin Ma, Garg Ankit, Fei Zhong, Chuyi Li, Nian Liu, Wenjuan Niu\* and Hongliang Cao\*

1958



### The study on the changing pattern of microbial community function and phenotypes in anaerobic-anoxic-oxic (A<sup>2</sup>O) process under the influence of temperatures in plateau habitats

Xiangyu Chen, Lishuai Zhao, Yongchen Zong\* and Kaiyue Hao\*

