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Environmental Science Processes & Impacts

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Cover
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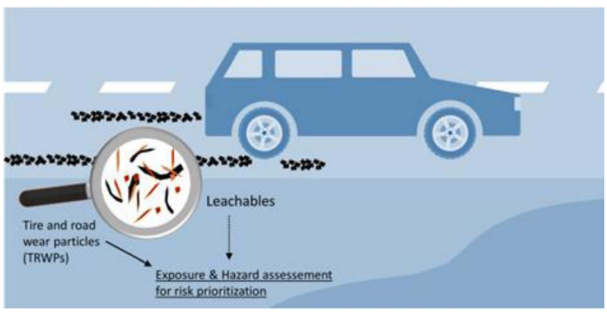
CRITICAL REVIEW

2212

Risk assessment of tire wear in the environment – a literature review

Kathrin Müller, Kenny Unice, Julie Panko, Benoît J. D. Ferrari, Florian Breider and Stephan Wagner*



PAPERS

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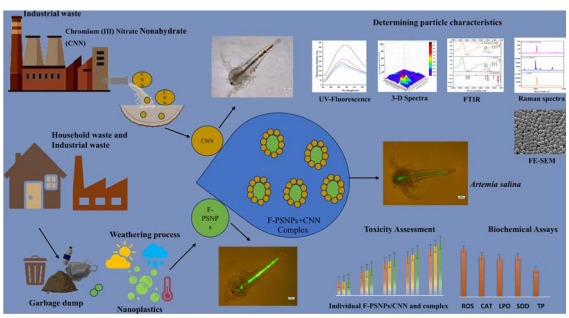
Individual and combined toxicities of fluorescent polystyrene nanoplastics and chromium(III) nitrate nonahydrate in *Artemia salina*

Mahalakshmi Kamalakannan, John Thomas* and Natarajan Chandrasekaran*



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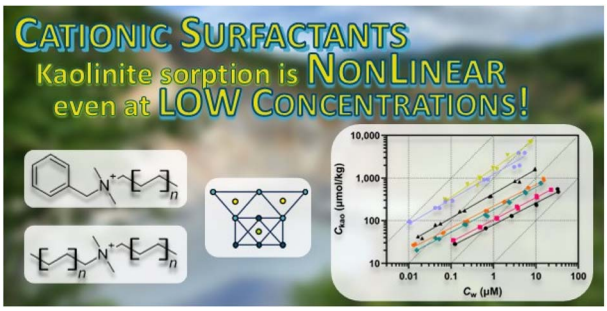
PAPERS

2252

Kaolinite sorption isotherms of benzalkonium and dialkyldimethylammonium compounds under dilute conditions investigated by direct and passive sampling methods

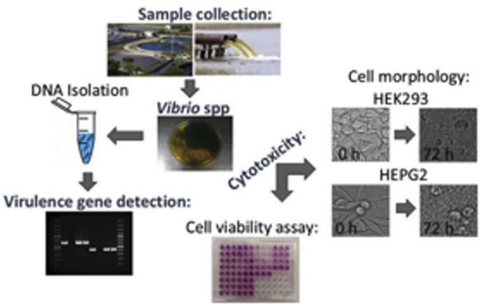
Satoshi Endo,* Anh T. Ngoc Do, Sakura Yoshii, Masami K. Koshikawa and Sadao Matsuzawa



2262

Virulence gene profiling and cytotoxicity of *Vibrio* spp. isolated from treated wastewater effluent and receiving surface waters in Durban, South Africa

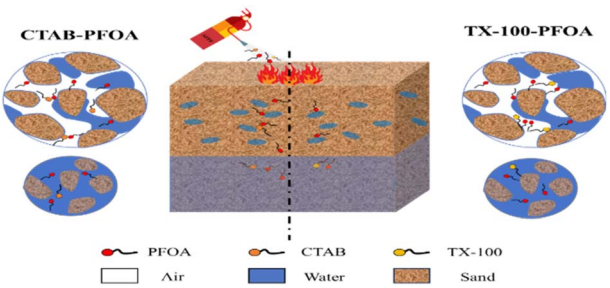
Kerisha Ramessar and Ademola O. Olaniran*



2277

Influence of cationic and nonionic hydrocarbon surfactants on the retention and transport of PFOA under saturated and unsaturated conditions

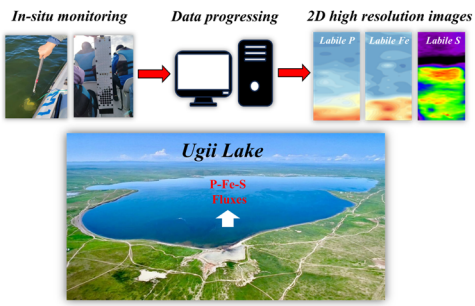
Tianhui Ji, Xiaohui Jin, Yifan Ji, Ni Yan,* Zhilin Guo and Mark L. Brusseau



2288

***In situ* high-resolution characterization of phosphorus–iron–sulfur dynamics across the sediment–water interface of a typical cold-arid lake (Ugii Lake, Mongolia)**

Rui Wang, Xinyue Guo, Cheng Liu, Lei Zhang, Zhaode Wang, Batnyam Tseveengerel, Odsuren Batdelger, Narangerel Serdyanjiv and Chao Han*



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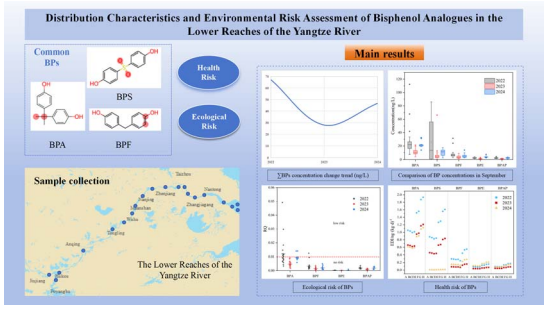
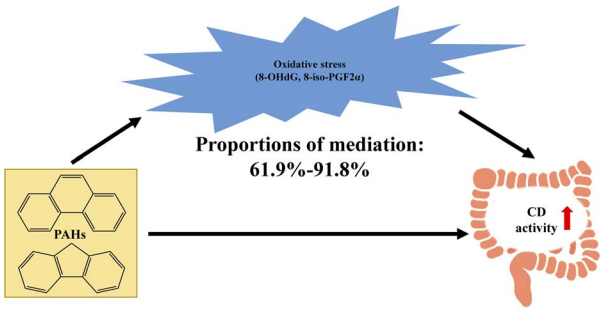
2298



Distribution characteristics and environmental risk assessment of bisphenol analogues in the lower reaches of the Yangtze River

Wanyu Li, Wenxuan Ma, Jiajun Chang, Yao Xiao, Rui Wang, Zhiliang Zhu, Daqiang Yin, Yue Li and Yanling Qiu*

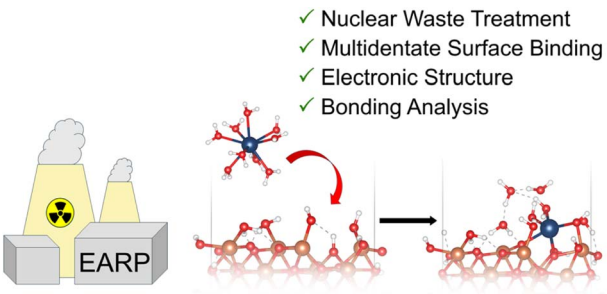
2307



Urinary polycyclic aromatic hydrocarbon metabolites and Crohn's disease activity: the mediating role of oxidative stress

Shu Xu, Liangle Yang, Yapan Liu, Danping Xiong, Wenjun Yin, Siran Zhu, Linlin Liu, Lei Zhao, Huan Wang, Lei Tu, Kaifang Zou, Tao Bai, Xiaohua Hou, Liangru Zhu* and Zhiyue Xu*

2318



The interaction of Pu(IV) with low index ferrihydrite surfaces: a periodic boundary condition DFT study

Ryan L. Dempsey and Nikolas Kaltsoyannis*

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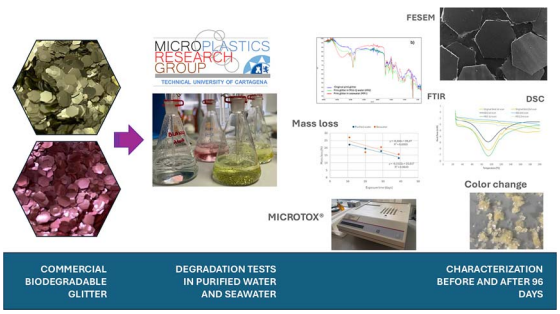

Characterization of commercial eco-glitters derived from modified regenerated cellulose after laboratory exposure in two aquatic media

Marta Doval-Miñarro,* Antonio López-Vivancos, Joaquín López-Castellanos and Javier Bayo

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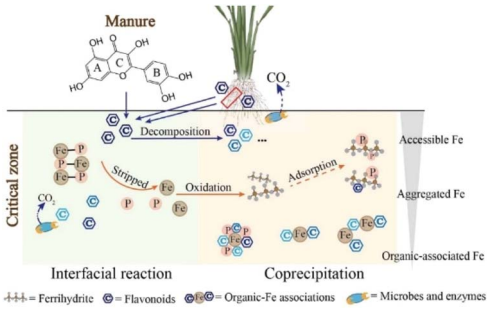
2341

Molecular mechanism of flavonoid-induced iron oxide transformation and implication for phosphorus loss risk in paddy soils

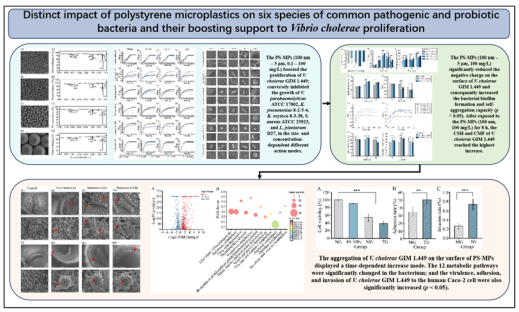
Wenjing Kang, Xiaolei Huang, Zhenyu Peng, Carmen Enid Martínez, Jian Xiao,* Wei Ran* and Qirong Shen



2353

Distinct impact of polystyrene microplastics on six species of common pathogenic and probiotic bacteria and their boosting support to *Vibrio cholerae* proliferation

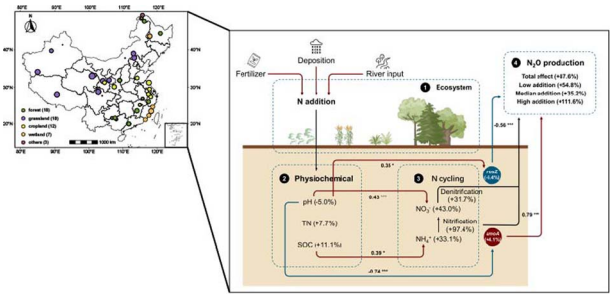
Tingting Gu, Yue Liu, Yongjie Wang, Huajun Zheng* and Lanming Chen*



2367

Nitrification regulates the responses of soil nitrous oxide emissions to nitrogen addition in China: a meta-analysis from a gene perspective

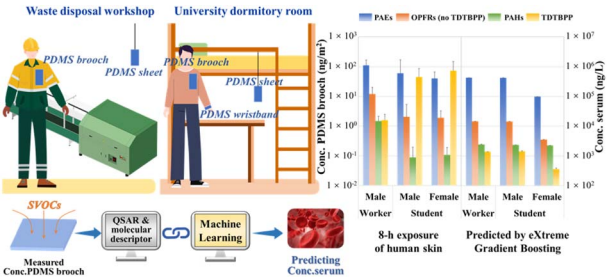
Zetao Dai, Yanglong Zhang, Yujie Li, Tao Xiang, Feifei Wang, Jiarui Peng, Shengchang Yang and Wenzhi Cao*



2379

From PDMS-based exposure profiling to machine learning-predicted serum concentrations: SVOC exposure disparities across occupational and environmental scenarios

Zihao Zhang, Yan Wang,* Yubin Wu, Ruize Chen and Hongbo Zheng



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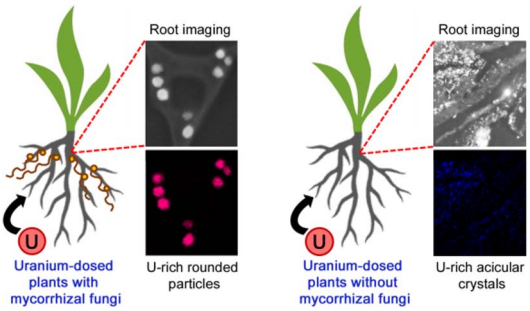

Arbuscular mycorrhizal fungi influence the speciation and subcellular abundance of uranium in plant roots

James M. Dinsley,* Kirstie Halsey, Eudri Venter, Miguel A. Gomez-Gonzalez, Katie L. Moore, Lorraine P. Field, Samuel Shaw, Clare H. Robinson and Jon K. Pittman*

2410

Updated global warming potentials of inhaled halogenated anesthetics, isoflurane and sevoflurane from new temperature dependent OH-kinetics

Sara Espinosa, Francisco Martínez, María Antiñolo, Ole J. Nielsen and Elena Jiménez*

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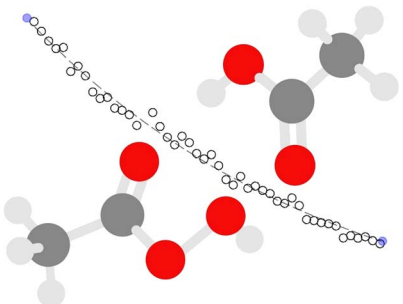

Decay rate of gas-phase peracetic acid in a polyvinyl fluoride sample bag

Amos Doepke,* Robert P. Streicher and Angela L. Stastny

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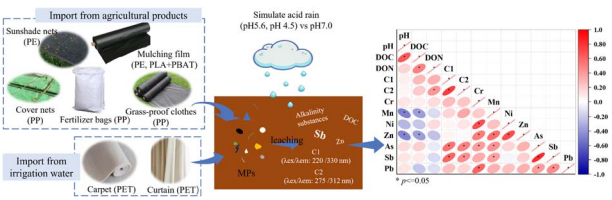

Microplastic leachates in farmland: impact of acid rain on DOM characteristics and metal release

Yinghui Xu, Yifan Mao, Xuzhi Li, Mei Li, Ting Guo, Haibo Zhang* and Yimin Cai*

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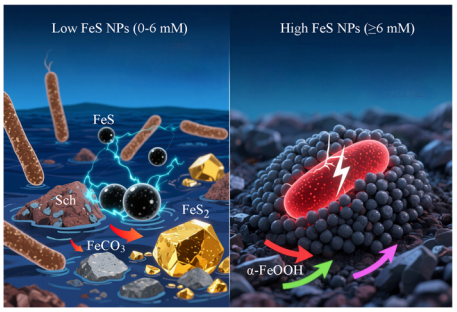
Metabolic trade-offs in *Desulfosporosus meridiei*: dose-dependent FeS nanoparticles modulate extracellular electron transfer and gene expression for mineral transformation

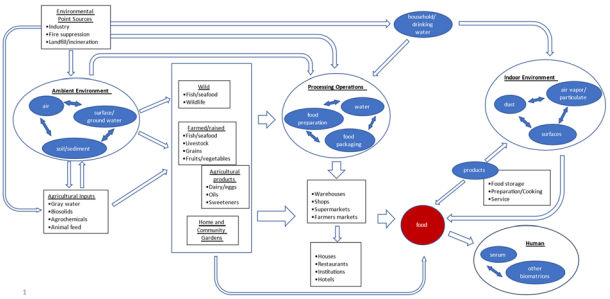
Changdong Ke, Yanping Deng, Siyu Zhang, Qian Yao, Renren Wu, Yanping Bao, Xiaohu Jin, Chuling Guo* and Zhi Dang



2452

Evidence mapping and scoping review of pathways for potential dietary exposure to per- and poly-fluoroalkyl substances (PFAS)

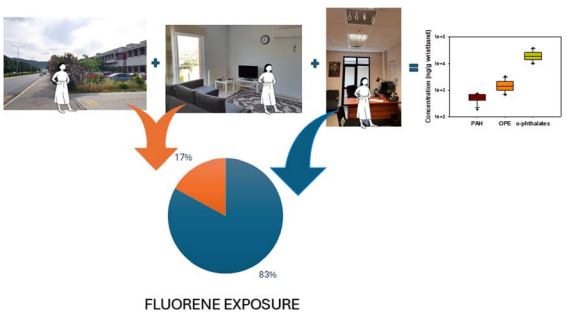
Lisa Jo Melnyk,* Chris Holder, Jeanne Luh, Kent Thomas and Elaine A. Cohen Hubal



2464

Understanding the role of a specific microenvironment in personal exposure to semi-volatile organic compounds using silicone wristbands

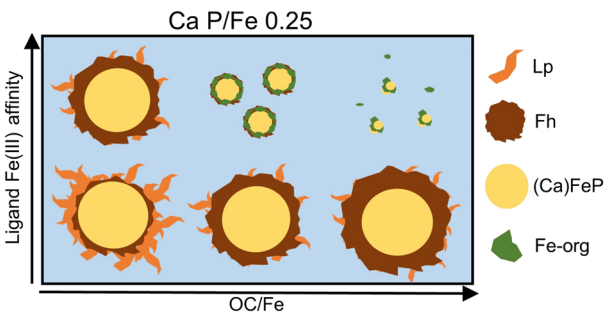
Zülfikar Akmermer and Hale Demirtepe*



2479

Effects of organic ligands, phosphate and Ca on the structure and composition of Fe(III)-precipitates formed by Fe(II) oxidation at near-neutral pH

Ville V. Nenonen, Ralf Kaegi, Stephan J. Hug, Jörg Luster, Jörg Göttlicher, Stefan Mangold, Lenny H. E. Winkel and Andreas Voegelin*



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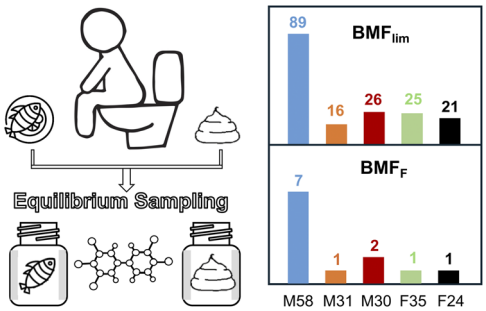
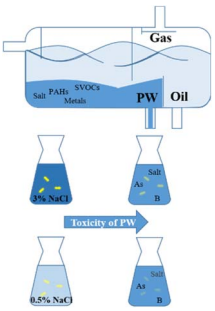


Do human individuals differ in their potential for lipophilic contaminant biomagnification?

Yuhao Chen, Terrence H. Bell, Ying Duan Lei and Frank Wania*

2519



Evaluation of the acute toxicity of oilfield-produced water using a recombinant luminescent *Escherichia coli* sensor

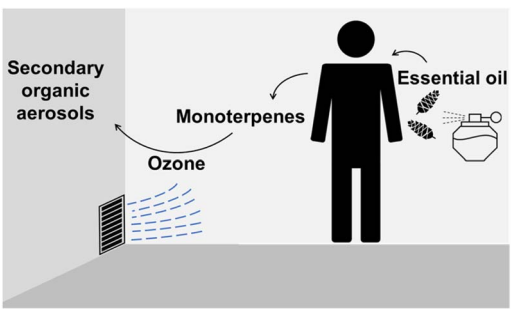
Chen Shen,* Lu Zheng, Lingling Li, Mingzhe Li, Yantian Zhang, Qiangzhi Guo, Anfeng Yu and Yuejie Wang*

2528

Footprints of magnetic particulate matter and black carbon in the Ny-Ålesund area, the Arctic

Yue Lin, Lin Liu, Hang Yang, Yacong Liu, Dawei Lu, Dong Cao, Yingming Li, Jianjie Fu, Ruiqiang Yang, Qinghua Zhang, Qian Liu* and Guibin Jiang

2538



Analysis of indoor secondary organic aerosol formation near occupants in a classroom using computational fluid dynamics simulations

Suwhan Yee, Youngbo Won, Bryan Cummings, Michael Waring, William P. Bahnfleth and Donghyun Rim*

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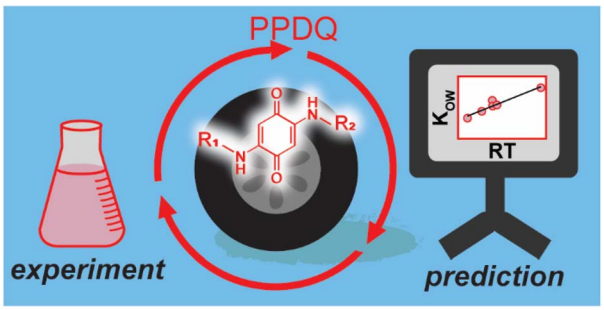
Physicochemical properties of tire-derived *para*-phenylenediamine quinones – a comparison of experimental and computational approaches

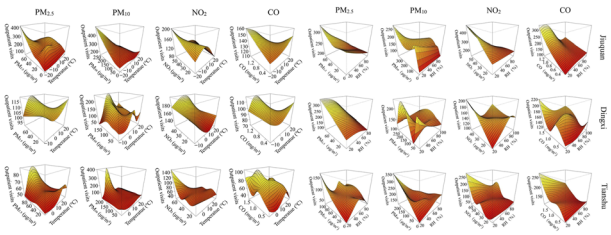
Simon H. Maguire, Misha Zvekic, Angelina Jaeger, Joseph Monaghan, Erik T. Krogh* and Heather A. Wiebe*



2564

Analysis of the effects of air pollutants and meteorological factors on upper respiratory tract infection outpatients in Gansu Province

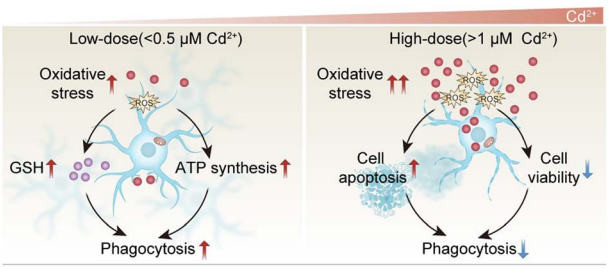
Hongran Ma, Furong Qu, Jiyuan Dong* and Jiancheng Wang



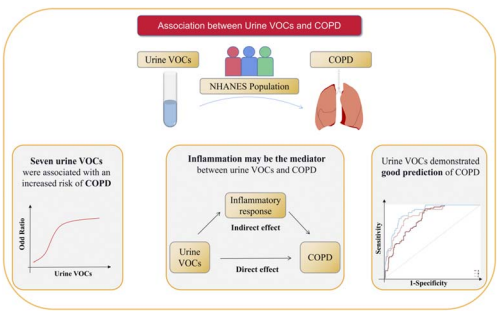
2579

Dual role of reactive oxygen species in the effects of cadmium on microglial survival and phagocytosis

Longtao Zhu, Xin Li, Siqi Yu, Lizheng Huang, Siqi Chen, Zhiheng Zheng* and Liling Su*



2588

Urine volatile organic compounds in predicting chronic obstructive pulmonary disease risk in a national observational study

Shuojia Xie, Junfeng Huang, Gengjia Chen, Huiting Luo, Yuexi Chen, Xiaowen Zhong, Linhang Yang, Ziwen Zheng, Zhaowei Yang, Shiyue Li,* Linwei Tian* and Ruchong Chen*