

Environmental Science Processes & Impacts

rsc.li/espi

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 2050-7887 CODEN ESPICZ 27(10) 3041–3300 (2025)



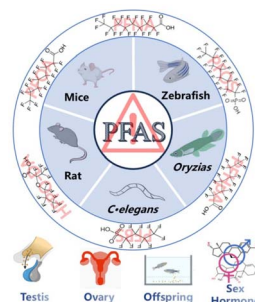
Cover
Image credit: Elad Zabinsky.

CRITICAL REVIEW

3050

Advancing the understanding of PFAS-induced reproductive toxicity in key model species

Ran Tao, Mingliang Sun, Jiateng Ma, Jiali Li, Xinni Yao, Minjie Li* and Liang-Hong Guo*

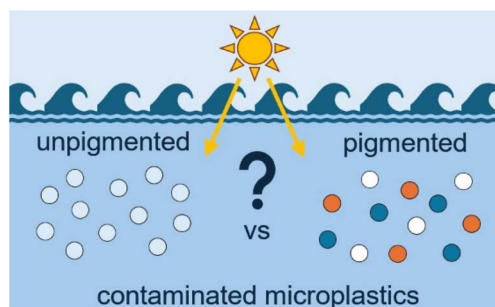


COMMUNICATION

3076

Influence of microplastic colour on photodegradation of sorbed contaminants

Laura C. Matchett and Sarah A. Styler*



EES Catalysis

GOLD
OPEN
ACCESS

**Exceptional research on energy
and environmental catalysis**

Open to everyone. Impactful for all

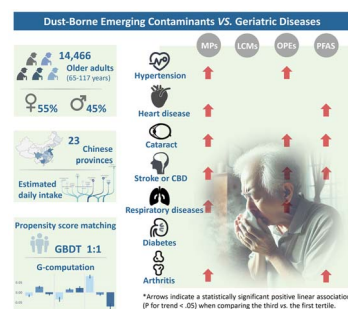
rsc.li/EESCatalysis

**Fundamental questions
Elemental answers**

3083

Dust-borne emerging contaminants: an underrecognized risk factor for non-communicable diseases in older Chinese adults

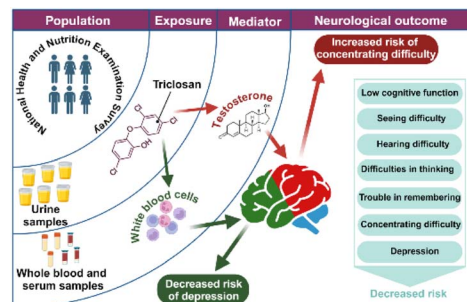
Luhan Yang, Yu Wang, Le He, Lei Xiang, Lei Wang, Yiming Yao, Hongwen Sun and Tao Zhang*



3095

Double-edged implications of triclosan for the neuroendocrine system: evidence from the national health and nutrition examination survey (2011–2014 NHANES)

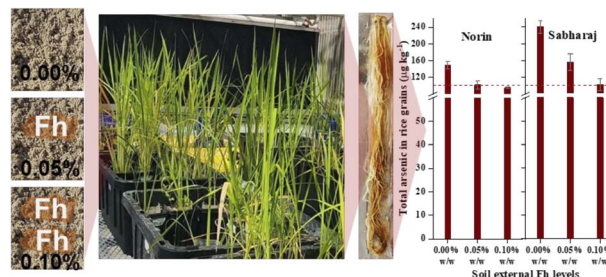
Zhiming Li, Lichun Ma, Yizhou Zhong, Boxuan Liang, Yuji Huang and Zhenlie Huang*



3107

Ferrihydrite level in paddy soil affects inorganic arsenic species in rice grains

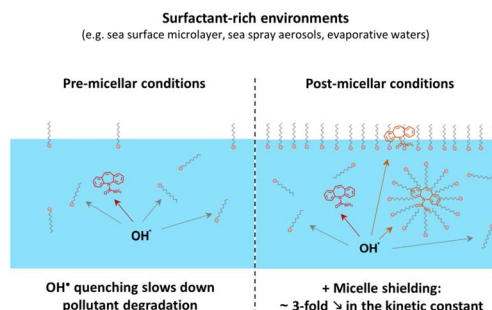
Arindam Malakar,* Daniel D. Snow, Michael Kaiser, Harkamal Walia, Trenton L. Roberts and Chittaranjan Ray*



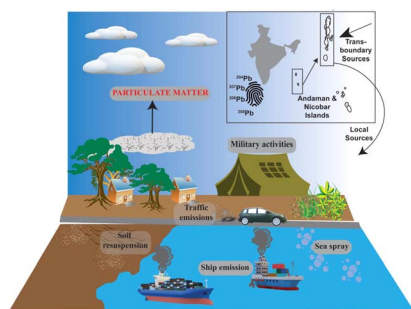
3119

Hydroxyl radical-initiated degradation kinetics of organic pollutants in surfactant-rich environments

Carole Abdel Nour, Stéphanie Rossignol,* Boulos Samia, Maria Bou Saad, Ndeye Khoyane Dieng, Stéphanie Lebarillier, Laurence Asia, Anne Monod and Pascal Wong-Wah-Chung



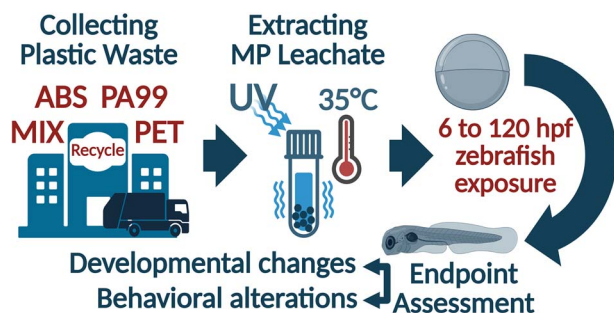
3132



Ship traffic and military activity identified as emerging sources of lead in remote island air

Iravati Ray,^{*} Jariya Kayee, Xianfeng Wang and Reshmi Das^{*}

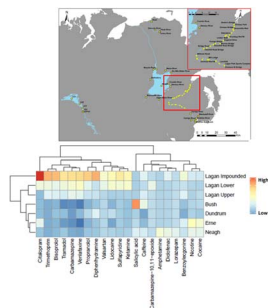
3148



Impacts of real microplastic leachates on the development and behavior of developing zebrafish (*Danio rerio*)

Emma Tsai, Melanie Wilson, Mohamed Ateia^{*} and Ahmed Abdelmoneim^{*}

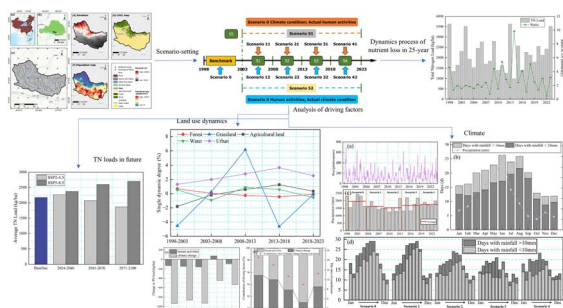
3163



An environmental risk assessment of contamination of lakes and rivers in Northern Ireland with pharmaceuticals, personal care products and drugs of abuse

William Ross Hunter,^{*} Helena Rapp-Wright, William Francis, Margarita White, Alexandra K. Richardson, Cryshanthi Christy, Faye Shiels, Ciara Mellon-Kane, Eugene O'Kane, Yvonne McElarney, Heather Moore and Leon P. Barron

3180



Assessing the response of agricultural watershed non-point source pollution to the dual impacts of climate change and human activities

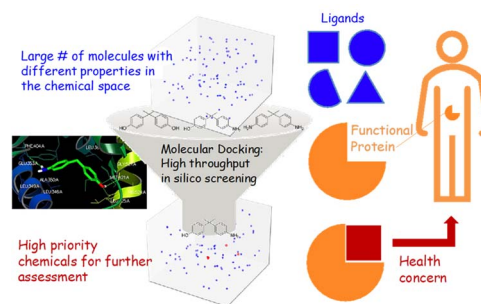
Shaolei Guo, Yuehan Zhang, Xianqi Zhang,^{*} Wanhui Cheng and Xin Wang



3192

Molecular docking for screening chemicals of environmental health concern: insight from a case study on bisphenols

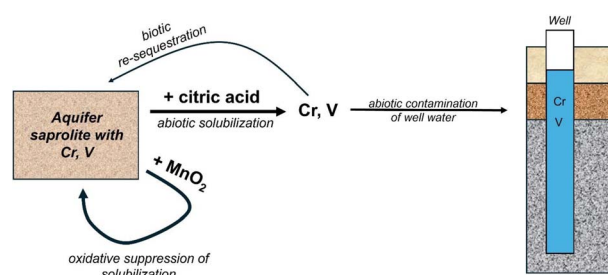
Samira Norouzi,* Noah Nahmiach, German Perez, Ying Zhu, Gilles H. Peslherbe, Derek C. G. Muir and Xianming Zhang*



3208

Impact of labile organic carbon and manganese oxide on chromium and vanadium subsurface mobility: evidence from laboratory incubation experiments

Fatai O. Balogun, Markus W. Koenek, Hannah R. Peel, David S. Vinson, Owen W. Duckworth and Matthew L. Polizzotto*



3221

Synergistic effect of exposure to ambient ozone and fine particulate matter on embryonic developmental outcomes among an assisted reproductive population

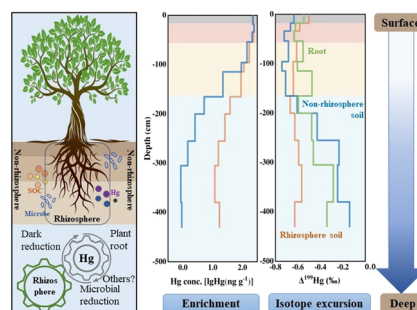
Hao Shi,* Chen-Xiao Han, Jian Hou, Chuan-Ju Chen, Ning-Zhao Ma, Yu-Ling Liang and Yi-Hong Guo*



3234

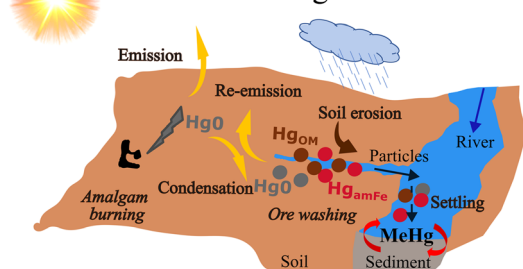
Rhizospheric organic matter drives mercury accumulation and reduction in deep subtropical forest soils: mercury isotope insights

Ge Zhang, Xun Wang,* Wei Yuan, Kang Luo, Longyu Jia and Ruidong Yang*



3246

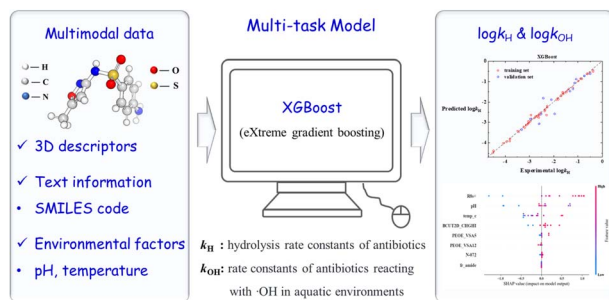
Artisanal Gold Mining in Burkina Faso



Mercury transfer and transformation from mine soil to river sediments: the potential role of amorphous iron oxides in methylation processes in southern Burkina Faso

D. Dabré,* S. Guédron, Y. Maïga, S. Jelavic, S. Campillo, J. Fin, S. Sentenac, O. Bruneel, O. Ouédraogo and R. Mason

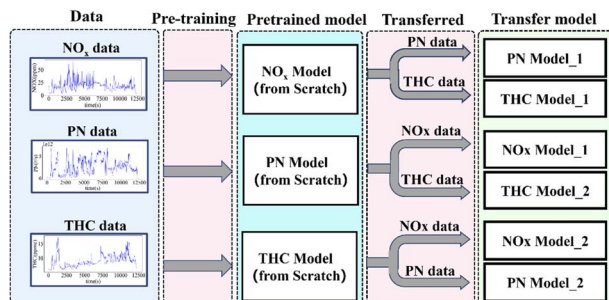
3261



Development of prediction models on the degradation kinetics parameters of antibiotics in aquatic environments with machine learning methods

Meijuan Zhang, Tong Xu,* Yueli Lan, Jiansheng Cui, Bo Yao, Mengzhen Hao and Shuangjiang Li*

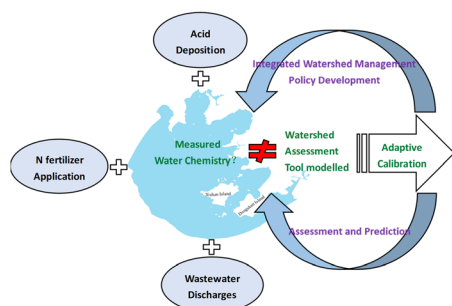
3272



Transfer learning for transient NOx, PN and THC emission prediction of non-road diesel engines based on NRTC experiments

Wen Zeng, Haiyi Wang, Feng Zhou,* Jianqin Fu, Tao Wen, Kainan Yuan and Xiongbo Duan

3286



Modified MAGIC model to assess and predict acidification effects on water chemistry changes in Taihu lake, China

Taoran Shi, Xiaoke Zhuo, Gaoying Xu, Jinbiao Ma, Juntao Fan and Tao Yu*



CORRECTIONS

3297

Correction: Tiny pollutants, big consequences: investigating the influence of nano- and microplastics on soil properties and plant health with mitigation strategies

Wael Hamd,* Vanessa El Bitar, Mantoura Nakad and Elie A. Daher

3298

Correction: Quantifying ambient concentration and emission profile of D5-siloxane of a residential neighborhood in the Greater Houston area

Kyle P. McCary, Sining Niu, Alana J. Doderio, Yeaseul Kim, Heewon Yim, Sahir Gagan, Karsten Baumann, Timothy B. Onasch, Raghu Betha, Qi Ying and Yue Zhang*

