## **Environmental Science: Advances**

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#### IN THIS ISSUE

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#### Cover

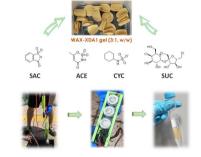
See Si-Si Liu, Chang-Er Chen et al., pp. 837-847. Image reproduced by permission of Si-Si Liu from Environ. Sci.: Adv., 2023, 2, 837.

## **PAPERS**

837

Development of diffusive gradients in thin-films with mixed binding gels for in situ monitoring of artificial sweeteners in waters

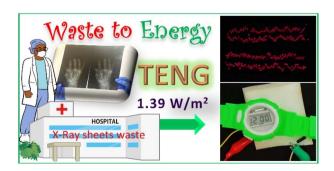
Hussain Ijaz, Jin-Xin Zi, Si-Si Liu,\* Qi-Si Cai, Sheng-Ming Cheng, Zong-Xi Zhao, Guang-Guo Ying, Andy J. Sweetman and Chang-Er Chen\*



#### 848

A medical waste X-ray film based triboelectric nanogenerator for self-powered devices, sensors, and smart buildings

M. Navaneeth, Supraja Potu, Anjaly Babu, Rakesh Kumar Rajaboina,\* Uday Kumar K, Haranath Divi, Prakash Kodali and Balaji K.



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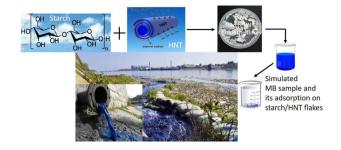


#### **PAPERS**

#### 861

A starch based sustainable bio-hybrid composite for surface assimilation of methylene blue: preparation, characterization, and adsorption study

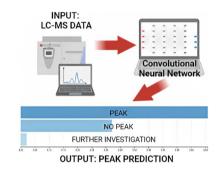
Anargha P. Nambiar, Rahul Pillai, Mallika Sanyal, Yugesh Vadikkeettil and Pranav S. Shrivastav



#### 877

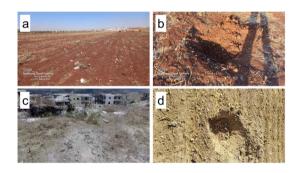
Application of deep learning to support peak picking during non-target high resolution mass spectrometry workflows in environmental research

Kate Mottershead and Thomas H. Miller\*



A baseline survey of potentially toxic elements in the soil of north-west Syria following a decade of conflict

Miassar Alhasan, Abdulkarim Lakmes, Mohammad Gazy Alobaidy, Safwan AlHaeek, Muhammed Assaf, Lorna Dawson, Duncan Pirrie, Ziad Abdeldayem and Jonathan Bridge\*



#### 898

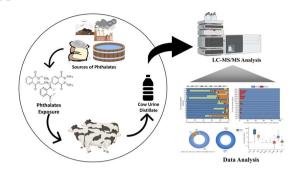
Phosphate removal by ex situ generated Fe (hydr) oxides from scrap iron electrocoagulation: the critical role of coprecipitation

Shiwei Xie, Zhengkang Bai, Wei Shao, Chen Wang, Jianglong Qin, Ze Liu and Peng Liao\*



### **PAPERS**

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# Investigating the urinary concentrations and distribution of phthalate metabolites in cow urine distillate in India

Sachin B. Jorvekar, Jaya Ajay Singh, Manthan Sharma, Gayatri Narkhede, Rahul Moriya, Dhanashri Pimpare and Roshan M. Borkar\*

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M = molecule  $S_{ij} = \text{SMILES fragment}$  CW = correlation weight

$$\begin{pmatrix} M_1 \\ M_2 \\ M_3 \\ \vdots \\ M_m \end{pmatrix} \rightarrow \begin{pmatrix} S_{11} & S_{12} & \dots S_{N_1} \\ S_{21} & S_{22} & \dots S_{N_2} \\ S_{31} & S_{32} & \dots S_{N_2} \\ \vdots & \vdots & \vdots & \vdots \\ S_{m1} & S_{m2} & \dots S_{m} \end{pmatrix} \rightarrow Monte\ Carlo\ method \rightarrow \begin{pmatrix} CW(S_{11}) & CW(S_{12}) & \dots & CW(S_{N_1}) \\ CW(S_{21}) & CW(S_{22}) & \dots & CW(S_{N_2}) \\ CW(S_{31}) & CW(S_{32}) & \dots & CW(S_{N_2}) \\ \vdots & \vdots & \vdots & \vdots & \vdots \\ CW(S_{m1}) & CW(S_{m2}) & \dots & CW(S_{mn}) \end{pmatrix}$$

 $Henry's \ law \ constant = C_0 + C_1 \times \sum CW(S_{ij})$ 

Does the accounting of the local symmetry fragments in SMILES improve the predictive potential of the QSPR-model for Henry's law constants?

Andrey A. Toropov, Alla P. Toropova,\* Alessandra Roncaglioni and Emilio Benfenati