

Table of Contents

[Previous Issue](#) | [Next Issue](#)


January 21, 2014
Volume 48, Issue 2
Pages 873-1360

In this issue:

- | | | |
|---|--|--|
| » FEATURES | » VIEWPOINTS | » POLICY ANALYSIS |
| » CHARACTERIZATION OF NATURAL AND AFFECTED ENVIRONMENTS | » ENVIRONMENTAL PROCESSES | » ENVIRONMENTAL MODELING |
| » SUSTAINABILITY ENGINEERING AND GREEN CHEMISTRY | » ENVIRONMENTAL MEASUREMENTS METHODS | » REMEDIATION AND CONTROL TECHNOLOGIES |
| | » ECOTOXICOLOGY AND HUMAN ENVIRONMENTAL HEALTH | » ENERGY AND THE ENVIRONMENT |
| | | » CORRESPONDENCE |

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Physical interactions between engineered nanoparticles and cell membranes play an important role in nanotoxicology. However, mechanisms behind these interactions remain elusive due in part to the complex nature of cell membranes. Model cell membranes (lipid bilayers) are amenable to a range of experimental techniques and provide a versatile tool to study these mechanisms. [View the article.](#)



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FEATURES

 Nanoparticles Meet Cell Membranes: Probing Nonspecific Interactions using Model Membranes

Kai Loon Chen and Geoffrey D. Bothun

pp 873-880

Publication Date (Web): December 16, 2013 (Feature)

DOI: 10.1021/es403864v

ACS Section: [Toxicology](#)

[First Page](#)

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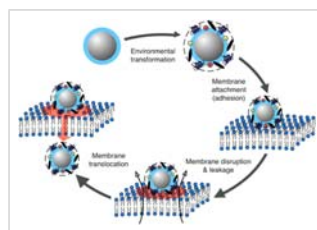


Figure 1 of 5

VIEWPOINTS

■ ***Daphnia magna* May Serve As a Powerful Tool in Screening Endocrine Disruption Chemicals (EDCs)**

Yuan Kang, Xiaomin Yan, Laisheng Li, Qiuyun Zhang, Lixuan Zeng, and Jiwen Luo

pp 881-882

Publication Date (Web): December 26, 2013 (Viewpoint)

DOI: 10.1021/es405379p

ACS Section: [Water](#)

First Page

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■ **The creation of farmland by gully filling on the Loess Plateau: a double-edged sword**

Zhao Jin

pp 883-884

Publication Date (Web): December 26, 2013 (Viewpoint)

DOI: 10.1021/es405392c

First Page

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Figure 1 of 2 

■ **Metallothioneins May Not Be Enough—The Role of Phytochelatins in Invertebrate Metal Detoxification**

Jacob G. Bundy, Peter Kille, Manuel Liebeke, and David J. Spurgeon

pp 885-886

Publication Date (Web): December 26, 2013 (Viewpoint)

DOI: 10.1021/es4054779

ACS Section: [Toxicology](#)

First Page

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Figure 1 of 2 

Four Reasons Why Traditional Metal Toxicity Testing with Aquatic Insects Is Irrelevant

Monica D. Poteat and David B. Buchwalter

pp 887-888

Publication Date (Web): December 27, 2013 (Viewpoint)

DOI: 10.1021/es405529n

Section: Toxicology

First Page

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Figure 1 of 2

Dissolved Methane: A Hurdle for Anaerobic Treatment of Municipal Wastewater

Ze-hua Liu, Hua Yin, Zhi Dang, and Yu Liu

pp 889-890

Publication Date (Web): December 27, 2013 (Viewpoint)

DOI: 10.1021/es405553j

Section: Water

First Page

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Figure 1 of 2

Fracking and Pollution: Can China Rescue Its Environment In Time?

Meiyu Guo, Yuan Xu, and Yongqin David Chen

pp 891-892

Publication Date (Web): January 9, 2014 (Viewpoint)

DOI: 10.1021/es405608b

First Page

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The Data Gap: Can a Lack of Monitors Obscure Loss of Clean Air Act Benefits in Fracking Areas?

Annmarie G. Carlton, Eleana Little, Michael Moeller, Stella Odoyo, and Paul B. Shepson
 pp 893-894
 Publication Date (Web): January 2, 2014 (Viewpoint)
 DOI: 10.1021/es405672t

ACS Section: Air Pollution and Industrial Hygiene

First Page

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Figure 1 of 2

POLICY ANALYSIS

Spatial Distribution of U.S. Household Carbon Footprints Reveals Suburbanization Undermines Greenhouse Gas Benefits of Urban Population Density

Christopher Jones and Daniel M. Kammen
 pp 895-902
 Publication Date (Web): December 13, 2013 (Policy Analysis)
 DOI: 10.1021/es4034364

ACS Section: Air Pollution and Industrial Hygiene

First Page | Supporting Info

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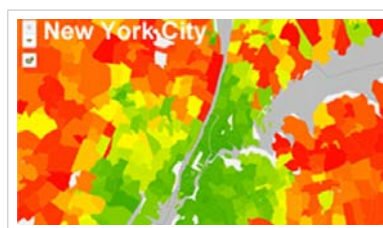


Figure 1 of 4

Hidden Cost of U.S. Agricultural Exports: Particulate Matter from Ammonia Emissions

Fabien Paulot and Daniel J. Jacob
 pp 903-908
 Publication Date (Web): December 25, 2013 (Policy Analysis)
 DOI: 10.1021/es4034793

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First Page

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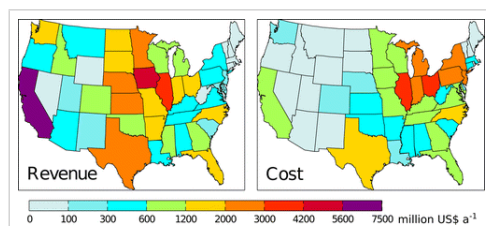


Figure 1 of 4

CHARACTERIZATION OF NATURAL AND AFFECTED ENVIRONMENTS

■ **Mixing State of Size-Selected Submicrometer Particles in the Arctic in May and September 2012**

Kihong Park, Gibaek Kim, Jae-suk Kim, Young-Jun Yoon, Hee-joo Cho, and Johan Ström

pp 909-919

Publication Date (Web): December 11, 2013 (Article)

DOI: 10.1021/es404622n

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[First Page](#) | [Supporting Info](#)

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