

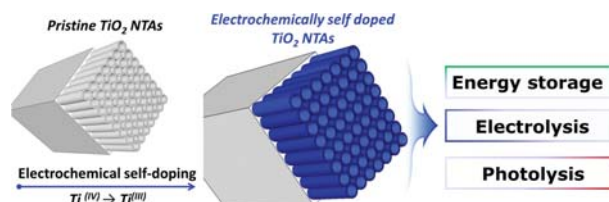
SPECIAL TOPIC: ADVANCED CHEMICAL TECHNOLOGIES FOR ENVIRONMENTAL APPLICATION

Leading Guest Editors:
Changha Lee, Kitae Baek

Scope of Topic: Chemical processes often provide effective solutions for many issues regarding environmental pollution. This special issue introduces recent advances in environmental cleanup technologies based on chemical processes. Review and research articles of different topics are included, such as advanced oxidation, electrochemical processes, membrane filtration as well as adsorption.

REVIEW PAPER

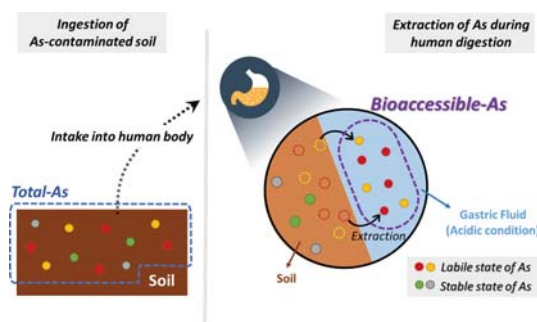
- Sung Pil Hong, Seonghwan Kim, 1753 **A short review on electrochemically self-doped TiO₂ nanotube arrays: Synthesis and applications**
Nayeong Kim, Jeyong Yoon,
and Choonsoo Kim



- Yong-Yoon Ahn and EunTae Yun 1767 **Heterogeneous metals and metal-free carbon materials for oxidative degradation through persulfate activation: A review of heterogeneous catalytic activation of persulfate related to oxidation mechanism**

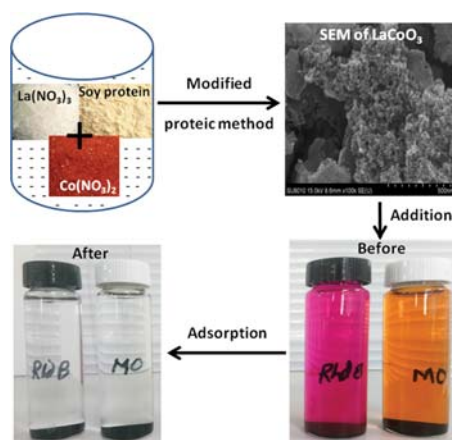
RAPID COMMUNICATION

- Su-Jin Min, Hye-Bin Kim, 1780 **Evaluation on bioaccessibility of arsenic in the arsenic-contaminated soil**
Seon-Hee Kim, and Kitae Baek



- Taewan Kim, Hyung-Eun Kim, 1785 **Inactivation of *Escherichia coli* and MS2 coliphage via singlet oxygen generated by homogeneous photosensitization**
Jiyeon Cho, Hak-Hyeon Kim,
Jiwon Seo, Junghun Lee,
Joon-Young Choi, and Changha Lee
- Hak-Lae Lee, Myung-Soo Lee, 1791 **Visible-to-UV triplet-triplet annihilation upconversion from a thermally activated delayed fluorescence/pyrene pair in an air-saturated solution**
Hyun Park, Won-Sik Han,
and Jae-Hyuk Kim
- Young-seok Seo, Nuri Choi, 1799 **Free chlorine and phytic acid synergistically inactivated conidia of *Aspergillus* spp.**
Kangmin Kim, and Min Cho
- Philje Yang, Mugeun Song, 1806 **Synthesis conditions of porous clay heterostructure (PCH) optimized for volatile organic compounds (VOC) adsorption**
Daekeun Kim, Sokhee Philemon Jung,
and Yuhoon Hwang

- Sunho Yoon and Sungjun Bae 1814 **Development of magnetically separable Cu catalyst supported by pre-treated steel slag**
- Zaharaddeen N. Garba, Wei Xiao, Weiming Zhou, Ibrahim Lawan, Yifan Jiang, Mingxi Zhang, and Zhanhui Yuan 1826 **Process optimization and synthesis of lanthanum-cobalt perovskite type nanoparticles (LaCoO_3) prepared by modified proteic method: Application of response surface methodology**

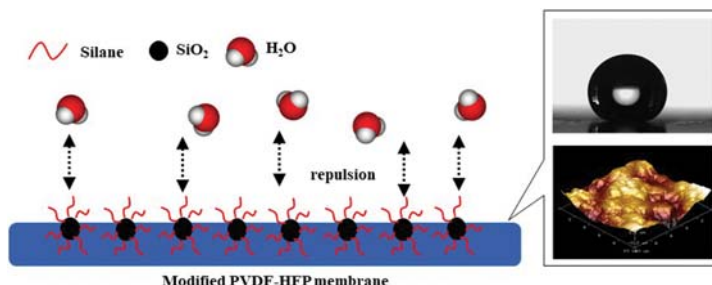


INVITED REVIEW PAPER

- Pawan Kumar, Eric Vejerano, Azmatullah Khan, Grzegorz Lisak, Jeong Hyeon Ahn, and Ki-Hyun Kim 1839 **Metal organic frameworks (MOFs): Currents trends and challenges in control and management of air quality**

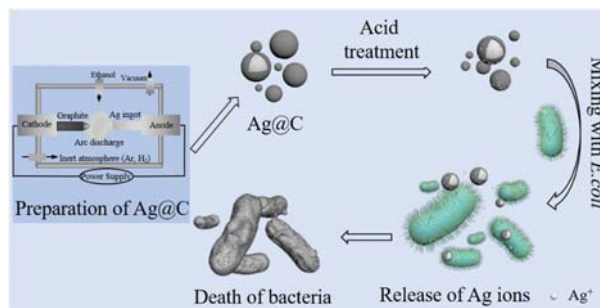
RAPID COMMUNICATION

- Moau Jian Toh, Pei Ching Oh, Abdul Latif Ahmad, and Julien Caille 1854 **Enhancing membrane wetting resistance through superhydrophobic modification by polydimethylsilane-grafted- SiO_2 nanoparticles**



BIOTECHNOLOGY

- Vahab Montazeri, Masoud Rahimi, and Bahman Zarenezhad 1859 **Energy saving in carbon dioxide hydrate formation process using Boehmite nanoparticles**
- Aarcha Jayakumar and Radha Kuravappulam Vedhaiyan 1869 **Rapid synthesis of phytogetic silver nanoparticles using *Clerodendrum splendens*: its antibacterial and antioxidant activities**
- Zengkai Wang, Tianke Wang, An Hua, Song Ma, Zhidong Zhang, and Lei Liu 1882 **Prolonged antimicrobial activity of silver core-carbon shell nanoparticles**



- Carla-cezarina Pădurețu, 1890 **Influential extraction parameters for the characterization of chitosan from crab shell**
Raluca Isopescu, Ileana Rău,
Manuela Rossemary Apetroaei,
and Verginica Schröder

SEPARATION TECHNOLOGY, THERMODYNAMICS

- Anuj Kumar Prajapati 1900 **Hazardous As(III) removal using nanoporous activated carbon of waste garlic stem as adsorbent: Kinetic and mass transfer mechanisms**
and Monoj Kumar Mondal
- Ferda Civan Çavuşoğlu, Seher Akan, 1915 **Preparation of magnetic activated carbon-chitosan nanocomposite for crystal violet adsorption**
Ezgi Aleyna Arı, Ezgi Çetinkaya,
Elif Çolak, Gamze Nur Daştan,
Semina Deniz, Damla Erdem,
Melda Köksal, Sevgi Korkmaz,
Nursena Onsekiz, Betül Oruçoğlu,
Didem Özkaya, Hamdi Buğra Uslu,
Çağlanur Ünal, Oğulcan Yıldız,
Şeyma Özkara-Aydınoglu,
and Şahika Sena Bayazit
- Pinki Kashyap, Manju Rani, 1922 **Measurement and modeling of transport properties of binary liquid mixtures containing oxygenates and n-alkanes**
Dinesh Pratap Tiwari, and So-Jin Park

MATERIALS (Organic, Inorganic, Electronic, Thin Films)

- Reham Helmy Tammam, 1932 **Enhanced oxygen evolution reaction over glassy carbon electrode modified with NiO_x and Fe₃O₄**
Amany Mohamed Fekry,
and Mahmoud Mohamed Saleh
- Seul Lee, Bolormaa Gendensuren, 1940 **Effect of emulsified polymer binders on the performance of activated carbon electrochemical double-layer capacitors**
Boyeon Kim, Sangik Jeon,
Young-Hyun Cho, Taewon Kim,
and Eun-Suok Oh