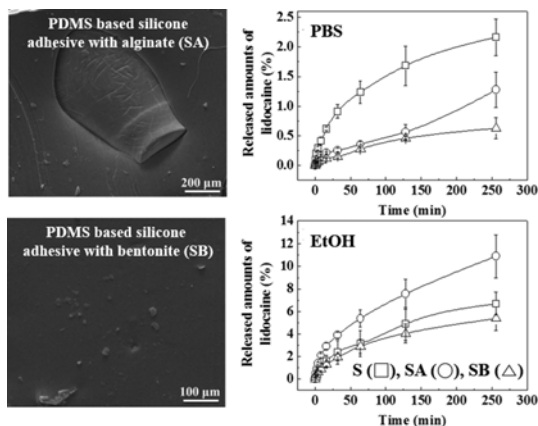


## INVITED REVIEW PAPER

- Muhammad Wajid Ullah, 1591 **Recent advancements in bioreactions of cellular and cell-free systems: A study of bacterial cellulose as a model**  
Mazhar Ul Islam, Shaukat Khan,  
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## RAPID COMMUNICATION

- Ji Eun Lee, Gyeong-Hyeon Gwak, 1600 **Controlled drug release in silicone adhesive utilizing particulate additives**  
Hyeon Mo Cho, Cheol Hyun Kim,  
Myong Euy Lee, and Jae-Min Oh



Silicone adhesives prepared with particulate additives showed controlled drug release kinetics with respect to type of additives or solvents.

## PROCESS SYSTEMS ENGINEERING, PROCESS SAFETY

- Minji Lee and Jiyong Kim 1604 **Feasibility study and benefit analysis of biomass-derived energy production strategies with a MILP (mixed-integer linear programming) model: Application to Jeju Island, Korea**
- Jeongeun Son, Huicheon Yang, 1619 **Technology development for the reduction of NO<sub>x</sub> in flue gas from a burner-type vaporizer and its application**  
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- Kun Zhao, Fang He, Zhen Huang, 1651 **Perovskite-type LaFe<sub>1-x</sub>Mn<sub>x</sub>O<sub>3</sub> (x=0, 0.3, 0.5, 0.7, 1.0) oxygen carriers for chemical-looping steam methane reforming: Oxidation activity and resistance to carbon formation**  
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- Younghwan Im, Jae Hyung Lee, 1669 **Effective photoconversion of CO<sub>2</sub> into CH<sub>4</sub> over Ti<sub>30</sub>Si<sub>70</sub>MCM-41 nanoporous catalyst photosensitized by a ruthenium dye**  
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- Prakash Parthasarathy, Hang Seok Choi, 1678 **Determination of thermal decomposition kinetics of low grade coal employing thermogravimetric analysis**  
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- Mohammad Hadi Dehghani, 1699 **Removal of methylene blue dye from aqueous solutions by a new chitosan/zeolite  
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- Hai Nguyen Tran, Sheng-Jie You, 1708 **Insight into adsorption mechanism of cationic dye onto agricultural residues-  
derived hydrochars: Negligible role of  $\pi$ - $\pi$  interaction**  
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- Jing Zhu, Jun-xia Yu, Jia-dong Chen, 1721 **Effects of co-ion initial concentration ratio on removal of Pb<sup>2+</sup> from aqueous solu-  
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- Sun-Wook Jeong, Jung Eun Yang, 1728 **Development of Cre-lox based multiple knockout system in *Deinococcus radiodu-  
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#### BIOTECHNOLOGY

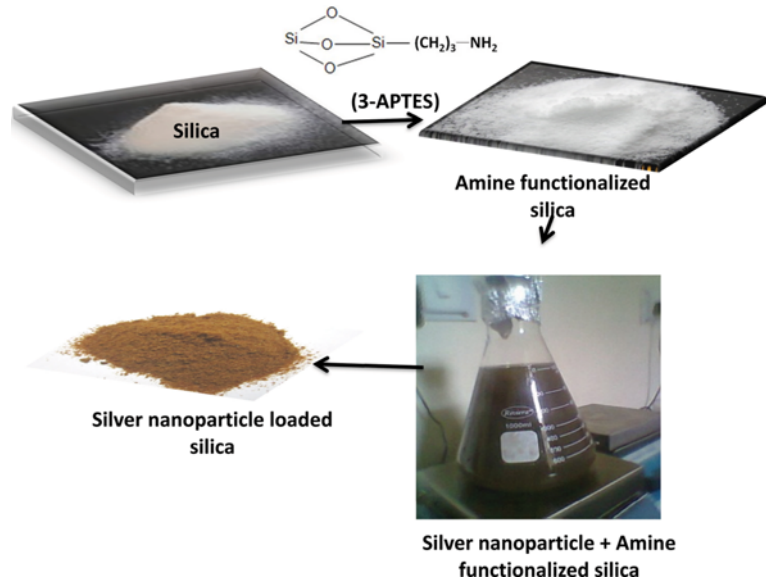
- 
- Vidhya Selvamani, 1734 **Construction of methanol sensing *Escherichia coli* by the introduction of novel  
Murali Kannan Maruthamuthu, chimeric MxcQZ/OmpR two-component system from *Methylobacterium organo-  
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Gyeong Tae Eom, and Soon Ho Hong

#### SEPARATION TECHNOLOGY, THERMODYNAMICS

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- Sutanuka Roy, Sukalyan Basu, 1740 **Synergistic extraction of Nd(III) with mixture of 8-hydroxyquinoline and its deriv-  
Mallavarapu Anitha, ative with di-2-ethyl hexyl phosphoric acid in different diluents**  
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- Ho-Sung Yoon, Chul-Joo Kim, 1748 **Ultrasonic-assisted leaching kinetics in aqueous FeCl<sub>3</sub>-HCl solution for the re-  
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- Xiaojiang An, Yong Kang, Li Qin, 1756 **Purification of Chinese herbal extract with chitosan hydrochloride: Flocculation  
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- Meltem Isleyen, Eda Sinirtas Ilkme, 1786 **V<sub>2</sub>O<sub>5</sub>-TiO<sub>2</sub> heterostructural semiconductors: Synthesis and photocatalytic elimi-  
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- Jixiang Cai, Bing Huang, Qikun Ma, 1793 **A new process of acidic hydrolysis of residual chlorosilane liquid for the prepara-  
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Preparation of silver nanoparticle loaded silica

- Mahsa Nemati, Sayed Mohsen Hosseini, and Meisam Shabanian 1813 **Developing thin film heterogeneous ion exchange membrane modified by 2-acrylamido-2-methylpropanesulfonic acid hydrogel-co-super activated carbon nanoparticles coating layer**
- Yu Kwon Kim, Gyuseong Lee, Yuna Kim, and Hyuk Kang 1822 **Enhanced photoactivity of stable colloidal TiO<sub>2</sub> nanoparticles prepared in water by nanosecond infrared laser pulses**
- Lingli Ni, Pengyin Zhang, Jing Chen, Jinglong Jiang, and Shijie Ding 1827 **Iso-propanol assisted preparation of individualized functional palygorskite fibers and its impact on improving dispersion abilities in polymer nanocomposites**
- Seong Rae Noh and Seong-Sik You 1834 **Development of osmotic repulsive potential using lattice fluid model on ligand capped metallic nanoparticles in gas expanded liquid system**

#### THE 11<sup>th</sup> KOREA-CHINA CLEAN ENERGY WORKSHOP

- Jun Lee, Yeon Ki Hong, and Jong Kyun You 1840 **Phase separation characteristics in biphasic solvents based on mutually miscible amines for energy efficient CO<sub>2</sub> capture**
- Zuo-Yu Sun and Guo-Xiu Li 1846 **Propagation speed of wrinkled premixed flames within stoichiometric hydrogen-air mixtures under standard temperature and pressure**
- Kang Zhang, Liting Xu, Shengli Niu, Chunmei Lu, Dong Wang, Qi Zhang, and Jing Li 1858 **Iron-manganese-magnesium mixed oxides catalysts for selective catalytic reduction of NO<sub>x</sub> with NH<sub>3</sub>**
- Hong Wang, Wen Xia, and Ping Lu 1867 **Study on adsorption characteristics of biochar on heavy metals in soil**
- Ye Jiang, Xuechong Wang, Changzhong Bao, Shanbo Huang, Xiuxia Zhang, and Xinwei Wang 1874 **Poisoning effect of CaO on CeO<sub>2</sub>/TiO<sub>2</sub> catalysts for selective catalytic reduction of NO with NH<sub>3</sub>**
- Shu-Qin Wang, Ming-Zhu Liu, Li-Li Sun, and Wei-Liang Cheng 1882 **Study on the mechanism of desulfurization and denitrification catalyzed by TiO<sub>2</sub> in the combustion with biomass and coal**