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EDITORIAL

1533 Special issue on “Green chemical process and intensification”

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REVIEW ARTICLE

1536 Solvent-resistant porous membranes using poly(ether-ether ketone): preparation and application

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1560 Ultrasonic emulsification: basic characteristics, cavitation, mechanism, devices and application

Chaoqun Yao, Shuainan Zhao, Lixue Liu, Zhikai Liu, Guangwen Chen

RESEARCH ARTICLE

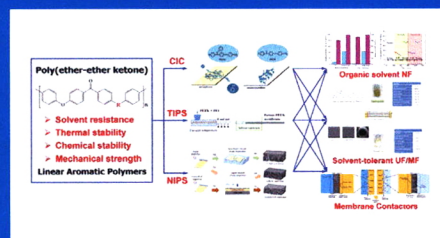
1584 Rare-earth separation based on the differences of ionic magnetic moment via quasi-liquid strategy

Na Wang, Fujian Li, Bangyu Fan, Suojiang Zhang, Lu Bai, Xiangping Zhang

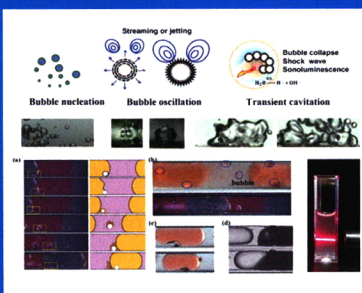
1595 High-gravity intensified iron-carbon micro-electrolysis for degradation of dinitrotoluene

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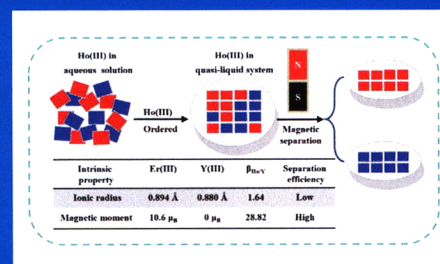
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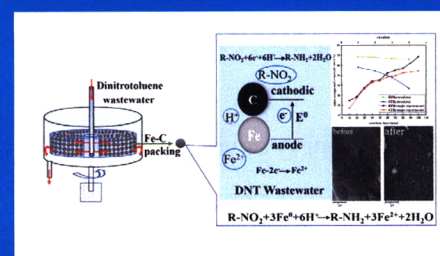
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1584



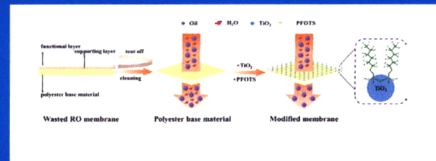
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1606 Highly hydrophobic oil–water separation membrane:
reutilization of waste reverse osmosis membrane

**Zihan Liu, Yang Luo, Lianchao Ning, Yong Liu,
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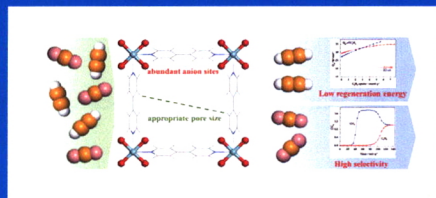
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**Yijian Li, Jianbo Hu, Jiyu Cui, Qingju Wang,
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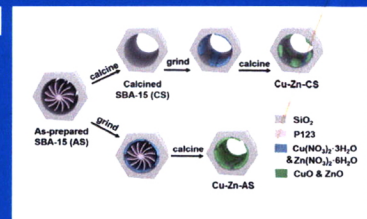
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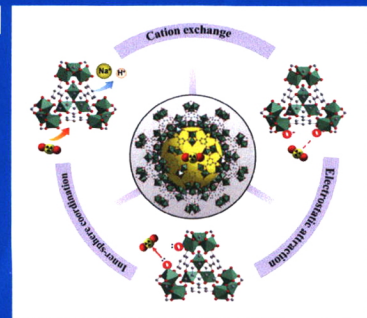
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**Xiyuan Bu, Ming Tian, Hongqing Wang, Lin Wang,
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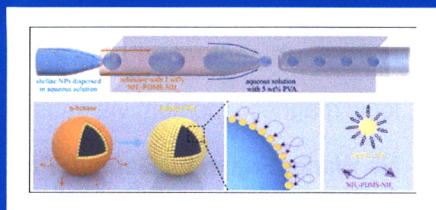
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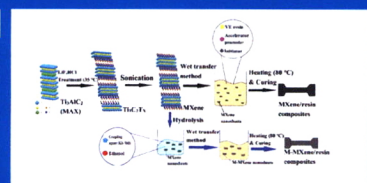
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Wenjiao Xu, Huaigang Cheng, Enze Li, Zihe Pan, Fangqin Cheng

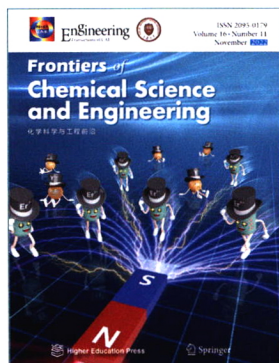
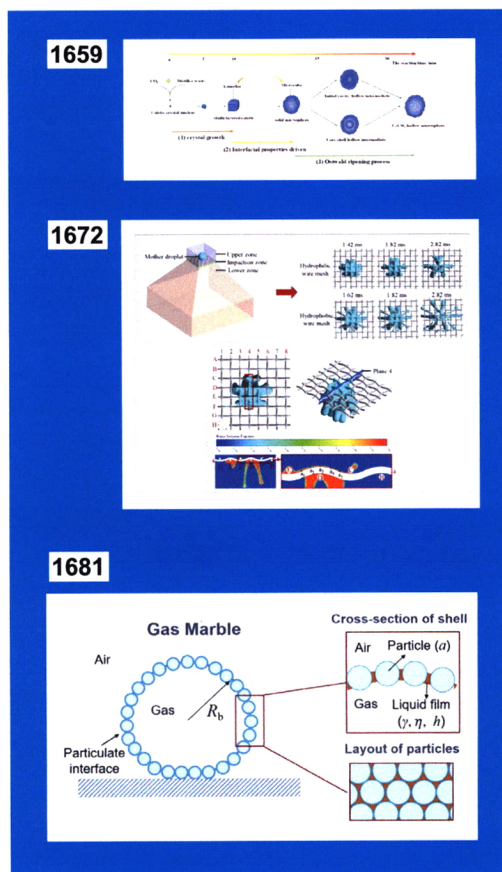
1672 Numerical studies of dynamic behavior of liquid film on single-layer wire mesh with different wettabilities

Hai-Long Liao, Lan Jiang, Hai-Xin Yu, Zhi-Hao Liu, Ji-Wen Fu, Guang-Wen Chu, Yong Luo

VIEWS & COMMENTS

1681 Gas marbles: ultra-long-lasting and ultra-robust bubbles formed by particle stabilization

Xuxin Zhao, Kunling Yang, Zhou Liu, Ho Cheung Shum, Tiantian Kong



COVER

The separation of rare earth elements is particularly difficult due to their similar physicochemical properties. Based on the differences of ionic magnetic moment via quasi-liquid strategy, two typical paramagnetic and diamagnetic rare-earth ions, Er^{3+} and Y^{3+} , are separated in the external magnetic field. The paramagnetic Er^{3+} in ionic liquid is rapidly attracted to the permanent magnet and gathered around the magnet finally, while the diamagnetic Y^{3+} has no response with the magnet. The ionic liquid herein provides a quasi-liquid surrounding of the rare-earth ions, which efficiently promotes the magnetism differences of Er^{3+} and Y^{3+} . The separation factors of Er/Y can be achieved at 9.0, six times of that in the traditional 2-ethylhexylphosphonic acid mono-(2-ethylhexyl) ester(P507)-HCl-kerosene system. Meanwhile, the separation factors of Ho/Y, another neighboring rare earth elements as a challenging separation couple, is up to 28.82 with the similar process. Magnetic separation via quasi-liquid system strategy provides a possibility of the novel, green, and efficient method for rare earth separation. (Na Wang, Fujian Li, Bangyu Fan, Suojiang Zhang, Lu Bai, Xiangping Zhang, pp. 1584–1594)

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