

Currently, only 15% of waste plastics enter the recycling route, and landfills account for 65% of scrap options. Efficient recycling of waste plastics not only contributes to sustainable environmental development, but also has important economic benefits and reduces energy consumption. Plastic recycling can be divided into four levels.

Chen is a staff researcher with the Fast and Cooperative Ion Transport in Polymer-Based Materials, or FaCT, center, one of 16 newly funded DOE Energy Frontier Research Centers that partner mainly ...

Zheng Chen As the dominant means of energy storage technology today, the widespread deployment of lithium-ion batteries (LIBs) would inevitably generate countless spent batteries at their end of ...

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Due to the large demand of lithium-ion batteries (LIBs) for energy storage in daily life and the limited lifetime of commercial LIB cells, exploring green and sustainable recycling methods becomes ...

Congyang Zhang,<sup>1,2,4</sup> Qingyun Kang,<sup>1,4</sup> Mingyu Chu,<sup>1</sup> Le He,<sup>1,3,\*</sup> and Jinxing Chen <sup>1,3,\*</sup> The extensive use of plastic products has led to severe plastic pollution. The use of solar energy to drive waste plastic upcycling is expected to achieve simultaneous resource sustainability, clean energy storage, and environmental remediation.

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Jinxing Mi's 48 research works with 1,061 citations and 3,504 reads, including: Synergistic effects of interface and valence state on boosting electrochemical CO<sub>2</sub> reduction activity of La<sub>2</sub>CuO<sub>4</sub>

Manipulation of Interfacial Diffusion for Controlling Nanoscale Transformation Jinxing Chen, Feng Jiang, Yadong Yin\*, Manipulation of Interfacial Diffusion for Controlling Nanoscale Transformation, Acc. Chem. Res. 2021, 54, 1168-1177.(Invited Review on special issue of &quot;Transformative Inorganic Nanocrystals&quot;.) Cover Art Convective Self-Assembly ...

Dr. Jinxing Chen has been working on the sustainable catalysts and solar energy harvesting, including (1)

design high activity and selectivity catalysts for efficient polyolefin recycling (direct cracking, hydrocracking, hydrogenolysis); (2) solar-driven plastic recycling (photocatalysis and photothermal catalysis); and (3) application of in ...

**Abstract.** Coupling energy storage system is one of the potential ways to improve the peak regulation and frequency modulation performance for the existing combined heat power plant. Based on the characteristics of energy storage types, achieving the accurate parameter design for multiple energy storage has been a necessary step to coordinate ...

Jinxing CHEN, PhD, Associated Professor. FUNSOM, Soochow University. 199 Ren'ai Road, Suzhou, 215123 Jiangsu, PR China. Tel: 19951261126. Email: chenjinxing@suda.cn. Official Wechat Account ... Solar energy is clean, and the extensive use of solar energy is sustainable. At present, the energy conversion efficiency of solarthermal can be as ...

Semantic Scholar profile for Jinxing Chen, with 18 highly influential citations and 96 scientific research papers. ... with broadband absorption in the visible and near-infrared spectrum for significantly improved utilization of solar energy. Expand. 160. 1. PDF (opens in a new tab) PubMed (opens in a new tab)

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The extensive use of plastic products has led to severe plastic pollution. The use of solar energy to drive waste plastic upcycling is expected to achieve simultaneous resource sustainability, clean energy storage, and environmental remediation. This article reviews the current strategies and mechanisms of solar-driven catalytic plastic upcycling.

2021 [29] Jinxing Chen, Mingfu Gong, Yulong Fan, Ji Feng, Lili Han, Huolin Xin, Muhan Cao, Qiao Zhang, Dong Zhang, Danyuan Lei\*, Yadong Yin\*, Collective plasmon coupling in gold nanoparticle clusters for highly efficient photothermal therapy, ACS Nano, in revision. [28] Yinghua Qiu, Michael Lee, Jinxing Chen \*, Qiao Zhang, Effect of light intensity on solar-driven ...

Guozhu Chen (Member, IEEE) received the B.S. degree in electronics from Zhejiang Gongshang University, Hangzhou, China, in 1988, and the M.S. and Ph.D. degrees in power electronics from Zhejiang University, Hangzhou, China, in 1992 and 2001, respectively. Since 1992, he has been with the Faculty of ...

environmental protection, energy sustainability, and economic benefits. The use of sunlight to drive the upcycling of plastics not only solves the waste plastic issue but also realizes the conversion and storage of solar energy to chemical energy. Yu Liu, Qixuan Zhong, Panpan Xu, ..., LeHe, QiaoZhang, Jinxing Chen chenjinxing@suda.cn Highlights

AU - Chen, Jinxing. AU - Ye, Zuyang. AU - Yang, Fan. AU - Yin, Yadong. PY - 2021/2/1. Y1 - 2021/2/1. N2

- The nonradiative conversion of light to heat by plasmonic nanostructures, the so-called plasmonic photothermal effect, has attracted enormous attention due to their widespread potential applications.

Technical economic analysis shows that the recycling of 10<sup>7</sup> tons of waste PET by photothermal catalysis consumes 146.4 GW·h electrical energy and misses 7.44 × 10<sup>7</sup> tons of CO<sub>2</sub> emission.

Qi Liu, Jinxing Mi, Xiaoping Chen, Shihao Wang, Jianjun Chen\*, Junhua Li. Effects of phosphorus modification on the catalytic properties and performance of CuCeZr mixed metal catalyst for simultaneous removal of CO and NO<sub>x</sub>. Chemical Engineering Journal, 2021, 423, 130228. ... Green Energy & Environment, 2023, 8, 4-6.

Jinxing Chen; The extensive use of plastic products has led to severe plastic pollution. The use of solar energy to drive waste plastic upcycling is expected to achieve simultaneous resource ...

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