

2021 [29] Jinxing Chen, Mingfu Gong, Yulong Fan, Ji Feng, Lili Han, Huolin Xin, Muhan Cao, Qiao Zhang, Dong Zhang, Dangyuan 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 ...

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.

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.

Congyang Zhang,^{1,2,4} Qingyun Kang,^{1,4} Mingyu Chu,¹ Le He,^{1,3,*} and Jinxing Chen ^{1,3,*} 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.

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.

The energy required for driving the reaction includes consumption for chemical reaction and heat loss (convection and radiation), powered by solar energy and electricity in solar thermal and thermal catalysis, respectively. ... Jinxing Chen, ...

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 "Transformative Inorganic Nanocrystals") Cover Art Convective Self-Assembly ...

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



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Recent representative publications: (10) Jinxing Chen*, et al, Grave-to-Cradle Photothermal Upcycling of Waste Polyesters over Spent LiCoO₂, Nat. Commun. 2024, 15, 2730. (9) Jinxing Chen*, et al, Layered Double Hydroxide Derivates for Polyolefin Upcycling, JACS, 2024, doi: 10.1021/jacs.4c00327 (8) Jinxing Chen*, et al, Stable Interfacial Ruthenium Species for High ...

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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 ...

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