Chen jiliang energy storage materials

Dr. Huiwei Du currently works at the College of Materials and Chemistry, China Jiliang University. Huiwei does research in electrode materials of Li-ion batteries, Materials Physics, Solid State ...

Polyethylene glycol (PEG) is an important and popular phase change material (PCM), but is not a good antistatic material, which would cause the accumulation of static electricity and electrostatic discharge when used for the thermal energy storage and thermal management of electrical devices. Herein, we prepared a PEG-based solid-solid PCM ...

Rechargeable magnesium batteries (RMBs) are one of the more promising future energy storage systems. This work proposes a non-nucleophilic phenolate-based magnesium complex (PMC) electrolyte enabling reversible Mg stripping/plating with a low over-potential of 84.3 mV at 1 mA cm -2 bsequently, Co doping is introduced to prepare FeS 2, ...

Semantic Scholar extracted view of "Microwave-Anion-Exchange Route to Spinel Cuco2s4 Nanosheets as Cathode Materials for Magnesium Storage" by Zhitao Wang et al. ... Song Chen, +5 authors Enbo ... anode materials by a facile method and confirm that platanus fruit-like CuCo2S4 microspheres are a promising electrode material for energy storge.

@article{Shen2024ThermophysicalPI, title={Thermophysical properties investigation of phase change microcapsules with low supercooling and high energy storage capability: Potential for efficient solar energy thermal management}, author={Junfeng Shen and Ya-jun Ma and Fan Zhou and Xinxin Sheng and Ying Chen}, journal={Journal of Materials Science ...

Fe2O3 is one of the most important lithium storage materials and has attracted increasing interest owing to its good capacity in theory, abundant reserves, and better security.

Energy Storage Materials is an international multidisciplinary journal for communicating scientific and technological advances in the field of materials and their devices for advanced energy storage and relevant energy conversion (such as in metal-O2 battery). It publishes comprehensive research articles including full papers and short communications, as well as topical feature ...

Among various energy storage technologies, the latent heat storage/release by means of the melting/solidification processes of phase change materials (PCMs) has received great concerns worldwide, due to the large potential application of PCMs in the fields of solar energy storage, waste heat recovery, power saving, and environmental protection ...

Y Zheng, Y Jiao, J Chen, J Liu, J Liang, A Du, W Zhang, Z Zhu, SC Smith, ... Journal of the American Chemical Society 133 (50), 20116-20119, 2011. ... Energy Storage Materials 14, 22-48, 2018. 252: 2018: Recent advances in chemical adsorption ...

The Jahn-Teller effect (JTE) is one of the most important determinators of how much stress layered cathode materials undergo during charge and discharge; however, many reports have shown that traces of superstructure exist in pristine layered materials and irreversible phase transitions occur even after eliminating the JTE. A careful consideration of the energy of ...

ABSTRACT Electrochemical energy storage devices, such as supercapacitors and batteries, have been proven to be the most effective energy conversion and storage technologies for practical application. However, further development of these energy storage devices is hindered by their poor electrode performance. Carbon materials used in ...

College of Materials and Chemistry, China Jiliang University, Hangzhou, 310018, China ... Da Chen is a professor at China Jiliang University. He received his PhD degree in 2008 from the University of Science & Technology of China. ... as well as high-performance electrolyte and electrode materials for energy conversion and storage. Supporting ...

For the first time, bimetallic Ni-Co selenides with different Ni and Co ratios have been synthesized and used as electrode materials for high-power energy storage. Owing to the synergistic effect between Ni and Co, bimetallic Ni-Co selenides, especially for Ni0.67Co0.33Se, show higher specific capacity and i 2015 Journal of Materials Chemistry A Hot Papers

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The H2 storage properties of isoreticular metal-organic framework materials (IRMOFs), MOF-5 and IRMOF-10, impregnated with different numbers and types of heterogeneous C48B12 molecules were ...

A novel phase change material (PCM), namely, comb polyurethane with polyethylene oxide segments as side chains (DMPEG-PU), was synthesized through the reaction between diethanolamine-modified monomethoxy polyethylene glycol (MPEG) with isophorone diisocyanate and 1,4-butanediol. The crystalline property, phase change property, and thermal stability were ...

A review focusing on phase change materials for thermal energy storage, particularly their nanoencapsulation, and insight into future research possibilities. ... Li Feng Shunping Dong +7 authors Jiliang Wang. ... characterization of novel solid-solid phase change materials with a polyurethaneurea copolymer structure for thermal energy storage ...

Professor Chen Lixin"s team"s "Energy Storage Materials": "Machine Learning" accelerates the creation of hydrogen storage materials, helping solid-state hydrogen storage power

generation....

China Jiliang University; College of Materials Science and Engineering; ... Hongwei Chen; Puxu Liu [...] Junkuo Gao ... is crucial to renewable energy conversion and storage technologies. Herein ...

Qiu Jiliang [...] Liquan Chen; ... Potassium ion batteries have emerged as promising energy storage devices. Searching for proper electrode materials is still a challenge. Graphite as an anode has ...

Cobalt-manganese (Co-Mn)-based bimetallic compounds (such as Co-Mn oxides, hydroxides) have been investigated as a new type of high-performance electroactive materials for energy ...

The future trajectory of MXene materials in energy storage encompasses innovative material design, integrative device architectures, and considerations of environmental and societal implications. ... Minghua Chen is a master candidate with Prof. Kun Liang at Ningbo Institute of Materials Technology and Engineering (NIMTE), Chinese Academy of ...

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A motley variety of properties control abundant applications of materials and contribute to new materials design. 99 Hence, the utilization of ML methods plays an important role in the field of materials science, especially energy storage and conversion materials. In order to enlighten the future studies and accelerate the development of energy ...

DOI: 10.1016/J.APPLTHERMALENG.2017.08.161 Corpus ID: 115493717; Review on solid-solid phase change materials for thermal energy storage: Molecular structure and thermal properties @article{Fallahi2017ReviewOS, title={Review on solid-solid phase change materials for thermal energy storage: Molecular structure and thermal properties}, author={Ali ...

1 Introduction. With the increasing needs for renewable energy and the rapid development of novel electronic devices, energy electronic devices with high-performance and high-safety have attracted ever-growing interests. 1-4 To date, researchers have devoted significant efforts to explore new materials 2, 5, 6 and rationally designed structures 2, 5 to improve the capacity ...

Xiaowei Fu Weibo Kong Yanyan Zhang Liang Jiang Jiliang Wang Jingxin Lei. Materials Science, Environmental Science ... Synthesis and performances of novel solid-solid phase change materials with

hexahydroxy compounds for thermal energy storage? Changzhong Chen Wenmin Liu Hongwei Wang Kelin ... A novel solid-solid phase-change energy ...

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