

A 2018 Virtual Issue: Papers on Materials for Energy

A selection of papers chosen to illustrate the wide range of paper discussing materials that are used for energy production, storage, etc.

Skeleton networks of graphene wrapped double-layered polypyrrole/polyaniline nanotubes for supercapacitor applications

J Mater Sci (2018) 53:787–798

10.1007/s10853-017-1543-2

Synthesis of poly(m-phenylenediamine)-coated hexagonal Co₉S₈ for high-performance supercapacitors

J Mater Sci (2018) 53:759–773

DOI 10.1007/s10853-017-1537-0

High refractive index coating of phosphor-in-glass for enhanced light extraction efficiency of white LEDs

J Mater Sci (2018) 53:1335–1345

DOI 10.1007/s10853-017-1571-y

Porous layer assembled hierarchical Co₃O₄ as anode materials for lithium-ion batteries

J Mater Sci (2018) 53:1356–1364

DOI 10.1007/s10853-017-1579-3

Template-free scalable synthesis of TiO₂ hollow nanoparticles for excellent photoelectrochemical applications

J Mater Sci (2018) 53:2102–2114

DOI 10.1007/s10853-017-1642-0

Hierarchical 3D nitrogen and phosphorous codoped graphene/carbon nanotubes–sulfur composite with synergistic effect for high performance of lithium–sulfur batteries

J Mater Sci (2018) 53:2685–2696

DOI 10.1007/s10853-017-1678-1

Highly reproducible perovskite solar cells based on solution coating from mixed solvents

J Mater Sci (2018) 53:3590–3602

<https://doi.org/10.1007/s10853-017-1842-7>

Nano-dynamic mechanical analysis (nano-DMA) of creep behavior of shales: Bakken case study

J Mater Sci (2018) 53:4417–4432

DOI 10.1007/s10853-017-1821-z

A strategy to boost electrochemical properties of the graphene oxide–poly(3,4- ethylenedioxythiophene) composites for supercapacitor electrodes

J Mater Sci (2018) 53:5216–5228

DOI 10.1007/s10853-017-1904-x

Notable hydrogen production on LaxCa₁₂xCoO₃ perovskites via two-step thermochemical water splitting

J Mater Sci (2018) 53:6796–6806

DOI 10.1007/s10853-018-2004-2

Flexible lignin-derived electrospun carbon nanofiber mats as a highly efficient and binder-free counter electrode for dye-sensitized solar cells

J Mater Sci (2018) 53:7637–7647

DOI 10.1007/s10853-018-2059-0

Hyperbranched small-molecule electrolyte as cathode interfacial layers for improving the efficiency of organic photovoltaics

J Mater Sci (2018) 53:7715–7724
DOI 10.1007/s10853-018-2081-2

Flexible supercapacitor with high energy density prepared by GO-induced porous coral-like polypyrrole (PPy)/PET non-woven fabrics

J Mater Sci (2018) 53:8409–8419
DOI 10.1007/s10853-018-2131-9

Surface passivation with nitrogen-doped carbon dots for improved perovskite solar cell performance

J Mater Sci (2018) 53:9180–9190
DOI 10.1007/s10853-018-2190-y

N-cyanoethyl polyethylenimine as a water-soluble binder for LiFePO₄ cathode in lithium-ion batteries

J Mater Sci (2018) 53:9690–9700
DOI 10.1007/s10853-018-2247-y

Self-templated preparation of hollow mesoporous TiN microspheres as sulfur host materials for advanced lithium–sulfur batteries

J Mater Sci (2018) 53:10363–10371
DOI 10.1007/s10853-018-2326-0

Enhanced lithium and electron diffusion of LiFePO₄ cathode with two-dimensional Ti₃C₂ MXene nanosheets

J Mater Sci (2018) 53:11078–11090
DOI 10.1007/s10853-018-2398-x

Designing biomimetic porous celery: TiO₂/ZnO nanocomposite for enhanced CO₂ photoreduction

J Mater Sci (2018) 53:11595–11606
DOI 10.1007/s10853-018-2397-y

Fabrication of hollow carbon spheres with robust and significantly enhanced capacitance behaviors

J Mater Sci (2018) 53:12310–12321
DOI 10.1007/s10853-018-2425-y

Hybrid nanogenerator of BaTiO₃ nanowires and CNTs for harvesting energy

J Mater Sci (2018) 53:13081–13089
DOI 10.1007/s10853-018-2540-9

N-doped mesoporous carbon integrated on carbon cloth for flexible supercapacitors with remarkable performance

J Mater Sci (2018) 53:14573–14585
DOI 10.1007/s10853-018-2654-0

Functionalization of sheet structure MoS₂ with CeO₂–Co₃O₄ for efficient photocatalytic hydrogen evolution

J Mater Sci (2018) 53:15271–15284
DOI 10.1007/s10853-018-2687-4

Facile synthesis of Fe₃O₄/NiFe₂O₄ nanosheets with enhanced Lithium-ion storage by one-step chemical dealloying

J Mater Sci (2018) 53:15631–15642
DOI 10.1007/s10853-018-2729-y

Assembly of mesoporous SnO₂ spheres and carbon nanotubes network as a high-performance anode for lithium-ion batteries

J Mater Sci (2018) 53:15621–15630
DOI 10.1007/s10853-018-2727-0

Superior electrical, mechanical and electromagnetic interference shielding properties of polycarbonate/ ethylene-methyl acrylate-in situ reduced graphene oxide nanocomposites

J Mater Sci (2018) 53:16047–16061
DOI 10.1007/s10853-018-2749-7