

A 2018 Virtual Issue: Papers on Chemical Routes to Materials

A selection of papers chosen to illustrate the wide range of paper discussing in the Journal of Materials Science how materials are prepared by chemical routes and the applications of these materials

Microwave synthesis and voltammetric simultaneous determination of paracetamol and caffeine using an MOF-199-based electrode

J Mater Sci (2018) 53:2453–2471

DOI 10.1007/s10853-017-1715-0

Facile synthesis of Mg(OH)₂/graphene oxide composite by high-gravity technology for removal of dyes

J Mater Sci (2018) 53:2511–2519

DOI 10.1007/s10853-017-1740-z

Synthesis, nonlinear optical properties and cellular imaging of hybrid ZnS nanoparticles capped with conjugated terpyridine derivatives

J Mater Sci (2018) 53:1791–1800

DOI 10.1007/s10853-017-1621-5

A synergistically enhanced photothermal transition effect from mesoporous silica nanoparticles with gold nanorods wrapped in reduced graphene oxide

J Mater Sci (2018) 53:1810–1823

DOI 10.1007/s10853-017-1628-y

In situ characterization of Cu–Fe–Ox catalyst for water– gas shift reaction

J Mater Sci (2018) 53:1065–1075

DOI 10.1007/s10853-017-1559-7

Synthesis and characterization of phenol– formaldehyde microcapsules for self-healing coatings

J Mater Sci (2018) 53:1035–1048

DOI 10.1007/s10853-017-1551-2

3D hierarchical flower-like rutile TiO₂ nanosphere-based versatile photocatalyst

J Mater Sci (2018) 53:385–395

DOI 10.1007/s10853-017-1498-3

Dopamine modified polyaniline with improved adhesion, dispersibility, and biocompatibility

J Mater Sci (2018) 53:447–455

DOI 10.1007/s10853-017-1520-9

Preparation and characterization of photocatalytic TiO₂ films on functionalized stainless steel

J Mater Sci (2018) 53:3341–3363

DOI 10.1007/s10853-017-1755-5

Efficient and selective separation of U(VI) and Th(IV) from rare earths using functionalized hierarchically mesoporous silica

J Mater Sci (2018) 53:3398–3416

DOI 10.1007/s10853-017-1808-9

Highly efficient fluorescence probe for copper (II) ions based on gold nanoclusters supported on wool keratin

J Mater Sci (2018) 53:4056–4066

10.1007/s10853-017-1830-y

Fabrication and characterization of thermo-responsive GO nanosheets with controllable grafting of poly(hexadecyl acrylate) chains

J Mater Sci (2018) 53:4103–4117

10.1007/s10853-017-1864-1

Preparation and evaluation of superparamagnetic core– shell dummy molecularly imprinted polymer for recognition and extraction of organophosphorus pesticide

J Mater Sci (2018) 53:4897–4912

10.1007/s10853-017-1935-3

MOF-derived various morphologies of N-doped carbon composites for acetylene hydrochlorination

J Mater Sci (2018) 53:4913–4926

10.1007/s10853-017-1951-3

Electrostatic self-assembly behaviour of exfoliated $\text{Sr}_2\text{Nb}_3\text{O}_{10}$ nanosheets and cobalt porphyrins: exploration of non-noble electro-catalysts towards hydrazine hydrate oxidation

J Mater Sci (2018) 53:6494–6504

10.1007/s10853-018-2033-x

N-TiO₂/g-C₃N₄/Up-conversion phosphor composites for the full-spectrum light-responsive deNO_x photocatalysis

Mater Sci (2018) 53:7266–7278

10.1007/s10853-018-2056-3

Design of microencapsulated phase change material by one-step swelling polymerization in Pickering emulsion

J Mater Sci (2018) 53:7249–7257

10.1007/s10853-017-1494-7

Controllable synthesis of MoS₂ nanostructures from monolayer flakes, few-layer pyramids to multilayer blocks by catalyst-assisted thermal evaporation

J Mater Sci (2018) 53:8098–8107

10.1007/s10853-018-2103-0

Graphdiyne-hybridized N-doped TiO₂ nanosheets for enhanced visible light photocatalytic activity

J Mater Sci (2018) 53:8921–8932

10.1007/s10853-018-2210-y

Biocompatible nanoclusters of O-carboxymethyl chitosan-coated Fe₃O₄ nanoparticles: synthesis, characterization and magnetic heating efficiency

J Mater Sci (2018) 53:8887–8900

10.1007/s10853-018-2180-0

Synthesis, characterization and evaluation of resin-based carbon spheres modified by oxygen functional groups for gaseous elemental mercury capture

J Mater Sci (2018) 53:9429–9448

10.1007/s10853-018-2231-6

Preparation and mechanism of shape memory bismaleimide resins with high transition temperature, high toughness and good processability

J Mater Sci (2018) 53:10798–10811

10.1007/s10853-018-2367-4

Facile fabrication of hierarchical BiVO₄/TiO₂ heterostructures for enhanced photocatalytic activities under visible-light irradiation

J Mater Sci (2018) 53:11329–11342

10.1007/s10853-018-2442-x

Zr-MOFs based on Keggin-type polyoxometalates for photocatalytic hydrogen production
J Mater Sci (2018) 53:12016–12029
10.1007/s10853-018-2476-0

High-efficiency self-repairing anticorrosion coatings with controlled assembly microcapsules
J Mater Sci (2018) 53:12850–12859
10.1007/s10853-018-2596-6