

A 2018 Virtual Issue: Materials for Life Sciences

A selection of papers chosen to illustrate the wide range of papers discussing materials that are used in the life sciences.

Synthesis and characterization of mechanically strong carboxymethyl cellulose–gelatin–hydroxyapatite nanocomposite for load-bearing orthopedic application

J Mater Sci (2018) 53:230–246

DOI 10.1007/s10853-017-1528-1

Spectroscopic and electrochemical studies on the molecular interaction between copper sulphide nanoparticles and bovine serum albumin

J Mater Sci (2018) 53:202–214

DOI 10.1007/s10853-017-1521-8

Design of flexible dendrimer-grafted flower-like magnetic microcarriers for penicillin G acylase immobilization

J Mater Sci (2018) 53:937–947

DOI 10.1007/s10853-017-1581-9

Effects of microstructural mechanisms on the localized oxidation behavior of NiTi shape memory alloys in simulated body fluid

J Mater Sci (2018) 53:948–958

DOI 10.1007/s10853-017-1586-4

Broad-spectrum antimicrobial activity of bacterial cellulose silver nanocomposites with sustained release

J Mater Sci (2018) 53:1596–1609

DOI 10.1007/s10853-017-1638-9

An ordered electrospun polycaprolactone–collagen– silk fibroin scaffold for hepatocyte culture

J Mater Sci (2018) 53:1623–1633

DOI 10.1007/s10853-017-1670-9

Targeted delivery and thermo/pH-controlled release of doxorubicin by novel nanocapsules

J Mater Sci (2018) 53:2326–2336

DOI 10.1007/s10853-017-1679-0

In vitro degradation and bioactivity of composite poly-L-lactic (PLLA)/bioactive glass (BG) scaffolds: comparison of 45S5 and 1393BG compositions

J Mater Sci (2018) 53:2362–2374

DOI 10.1007/s10853-017-1743-9

Synthesis and characterization of gold-conjugated *Backhousia citriodora* nanoparticles and their anticancer activity against MCF-7 breast and HepG2 liver cancer cell lines

J Mater Sci (2018) 53:3106–3118

DOI 10.1007/s10853-017-1756-4

A new insight into in vitro behaviour of poly(ϵ -caprolactone)/bioactive glass composites in biologically related fluids

J Mater Sci (2018) 53:3939–3958

DOI 10.1007/s10853-017-1839-2

A three-dimensional porous hydroxyapatite nanocomposite scaffold with shape memory effect for bone tissue engineering

J Mater Sci (2018) 53:4734–4744

DOI 10.1007/s10853-017-1807-x

3D printing of hydroxyapatite scaffolds with good mechanical and biocompatible properties by digital light processing

J Mater Sci (2018) 53:6291–6301

DOI 10.1007/s10853-018-1992-2

A high strength semi-degradable polysaccharide-based hybrid hydrogel for promoting cell adhesion and proliferation

J Mater Sci (2018) 53:6302–6312

DOI 10.1007/s10853-018-2019-8

Zn–ZnO@TiO₂ nanocomposite: a direct electrode for nonenzymatic biosensors

J Mater Sci (2018) 53:7138–7149

DOI 10.1007/s10853-018-2106-x

Fabrication of biosensor based on core–shell and large void structured magnetic mesoporous microspheres immobilized with laccase for dopamine detection

J Mater Sci (2018) 53:7996–8008

DOI 10.1007/s10853-018-2165-z

Synthesis of bactericidal polymer coatings by sequential plasma-induced polymerization of 4-vinyl pyridine and gas-phase quaternization of poly-4-vinyl pyridine

J Mater Sci (2018) 53:8766–8785

DOI 10.1007/s10853-018-2183-x

Polypeptide-based artificial erythrocytes conjugated with near infrared photosensitizers for imaging-guided photodynamic therapy

J Mater Sci (2018) 53:9368–9381

DOI 10.1007/s10853-018-2276-6

A novel polyurethane modified with biomacromolecules for small-diameter vascular graft applications

J Mater Sci (2018) 53:9913–9927

DOI 10.1007/s10853-018-2321-5

Structure, mechanical properties and surface morphology of the snapping shrimp claw

J Mater Sci (2018) 53:10666–10678

DOI 10.1007/s10853-018-2364-7

Polyurethane–polyvinylpyrrolidone iodine blends as potential urological biomaterials

J Mater Sci (2018) 53:11176–11193

DOI 10.1007/s10853-018-2445-7

Hierarchical CuCo₂O₄/C microspheres assembled with nanoparticle-stacked nanosheets for sensitive non-enzymatic glucose detection

J Mater Sci (2018) 53:11951–11961

DOI 10.1007/s10853-018-2522-y

Moisture-triggered release of self-produced ClO₂ gas from microcapsule antibacterial film system

J Mater Sci (2018) 53:12704–12717

DOI 10.1007/s10853-018-2576-x

Construction of glucose and H₂O₂ dual stimuli-responsive polymeric vesicles and their application in controlled drug delivery

J Mater Sci (2018) 53:14063–14074

DOI 10.1007/s10853-018-2622-8

Silver nanoparticles-doped collagen–alginate antimicrobial biocomposite as potential wound dressing
J Mater Sci (2018) 53:14944–14952
DOI 10.1007/s10853-018-2710-9

pHe- and glutathione-stepwise-responsive polypeptide nanogel for smart and efficient drug delivery
J Mater Sci (2018) 53:14933–14943
DOI 10.1007/s10853-018-2689-2

Restorative dental resin functionalized with methacryloxy propyl trimethoxy silane to induce reversible in situ generation of enamel-like hydroxyapatite
J Mater Sci (2018) 53:16183–16197
DOI 10.1007/s10853-018-2533-8