

BDM AT THE FRONTIERS: GEOGRAPHY AND SCIENCE  
REVIEW ARTICLE BY Y.Y.S. HUANG ET AL

**Biofabrication and biomanufacturing in Ireland and the UK**

J.F. Murphy · M. Lavelle · L. Asciak · R. Burdis · H.J. Levis · C. Ligorio · J. McGuire · M. Polleres · P.O. Smith · L. Tullie · J. Uribe-Gomez · B.Q. Chen · J.I. Dawson · J.E. Gautrot · N.M. Hooper · D.J. Kelly · V.S.W. Li · A. Mata · A. Pandit · J.B. Phillips · W.M. Shu · M.M. Stevens · R.L. Williams · J.P.K. Armstrong · Y.Y.S. Huang **825**

REVIEW

**3D bioprinting of tumor models and potential applications**

H.X. Li · Y. Qiao · X.L. Dai · H.T. Tian · Z.Y. Han · S. Cheng · P. Gao · H.W. Cheng **857**

RESEARCH ARTICLES

**Hierarchical structures on platinum-iridium substrates enhancing conducting polymer adhesion**

L.Z. Li · C.Q. Jiang · L.M. Li **889**

**Electrospun polyvinyl alcohol fibres incorporating an antimicrobial gel for enzymatically controlled reactive oxygen species release**

J. Yupanqui Mieleles · C. Vyas · E. Daskalakis · M. Hassan · J. Birkett · A.M. Omar · G. Humphreys · C. Diver · P. Bartolo **899**

**Sustainable and untethered soft robots created using printable and recyclable ferromagnetic fibers**

W. Tang · Y.D. Gao · Z.Y. Dong · D. Han · V.V. Gorodov · E.Y. Kramarenko · J. Zou **926**

**3D-bioprinted tri-layered cellulose/collagen-based drug-eluting fillers for the treatment of deep tunneling wounds**

M. Govindharaj · N. Al Hashimi · S.S. Soman · J.R. Zhou · S. AlAwadhi · S. Vijayavenkataraman **938**

**Light/pH dual controlled drug release "nanocontainer" alleviates tumor hypoxia for synergistic enhanced chemotherapy, photodynamic therapy and chemodynamic therapy**

S.H. Liu · X. Zhang · Z.M. Bai · Y.B. Yang · J. Zhang · K. Li · Z.W. Liu · M. Shi · L.X. Dong · J.D. Wang · J. Li **955**

**Integrated nanoporous electroporation and sensing electrode array for total dynamic time-domain cardiomyocyte membrane resealing assessment**

W.Q. Sheng · Y. Li · C.L. Qin · Z.H. Zhang · Y.X. Pan · Z.C. Tong · C. Teng · X.W. Wei **972**

**Ca<sub>v</sub>3.3-mediated endochondral ossification in a three-dimensional bioprinted GelMA hydrogel**

Z. Wang · X. Wang · Y. Huang · J.J. Yang · Z. Wan · Z.L. Fu · X.Y. Gong · G.X. Chen · L. Yang **983**

**Electrospinning/3D printing-integrated porous scaffold guides oral tissue regeneration in beagles**

L. Yuan · C. Yuan · J.W. Wei · S.E. Jin · Y. Zuo · Y.B. Li · X.J. Liang · J.D. Li **1000**

**Novel heart valve leaflet designs with stiff polymeric materials and biomimetic kinematics**

C.C. Smid · G.A. Pappas · N. Cesarovic · V. Falk · P. Ermanni **1018**

**Photocrosslinkable human amniotic membrane hydrogel for recovery from spinal cord injury**

T. Xu · C.W. Yang · Y. Lu · H. Wang · C. Chen · Y.C. Zhou · X.Q. Chen **1035**

LETTER

**Advances in titanium alloys and orthopedic implants: new titanium alloys and future research directions**

Y. Mori · N. Mori **1053**

**Total contents I**

**Impact factor: 8.1 (2023)**

Further articles can be found at [link.springer.com](http://link.springer.com)

Indexed/abstracted in CNKI, Chemical Abstracts Service (CAS), Chinese Science Citation Database, Current Contents/Engineering, Computing and Technology, Dimensions, EBSCO Discovery Service, El Compendex, Google Scholar, INSPEC, Institute of Scientific and Technical Information of China, Naver, OCLC WorldCat Discovery Service, ProQuest-ExLibris Primo, ProQuest-ExLibris Summon, SCImago, SCOPUS, Science Citation Index Expanded (SciSearch), TD Net Discovery Service, UGC-CARE List (India), Ulrich's Periodicals Directory, WTI Frankfurt eG

Instructions for Authors for Bio-des. Manuf. are available at [www.springer.com/42242](http://www.springer.com/42242)

# BIO-DESIGN AND MANUFACTURING

生物设计与制造

**Editors-in-Chief:**  
H.Y. Yang · Z.F. Cui

**Biofabrication and biomanufacturing in Ireland and the UK**

J.F. Murphy · M. Lavelle · L. Asciak · R. Burdis · H.J. Levis · C. Ligorio · J. McGuire · M. Polleres · P.O. Smith · L. Tullie · J. Uribe-Gomez · B.Q. Chen · J.I. Dawson · J.E. Gautrot · N.M. Hooper · D.J. Kelly · V.S.W. Li · A. Mata · A. Pandit · J.B. Phillips · W.M. Shu · M.M. Stevens · R.L. Williams · J.P.K. Armstrong · Y.Y.S. Huang

