



Journal of  
MATERIALS RESEARCH

VOLUME 34 • NO 11  
JUNE 14, 2019

FOCUS ISSUE  
**(Nano)materials for  
Biomedical Applications**



<https://doi.org/10.1515/jmr-2019-1136> Published online by Cambridge University Press

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**(NANO)MATERIALS FOR BIOMEDICAL APPLICATIONS**

1827 Introduction

Mariana Amorim Fraga,  
Stephen E. Sadow,  
Bruno Vinícius Manzolli Rodrigues,  
Jorge Augusto de Moura Delezuk,  
Rodrigo Sávio Pessoa, Sachin Khapli

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1828–1844 Synthesis, surface modification, and applications of magnetic iron oxide nanoparticles

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Chunxia Xiong, Dengfeng Xie,  
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Yuemin Li, Xiong Xiao

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1845–1853 Evaluation and validation of synergistic effects of amyloid-beta inhibitor-gold nanoparticles complex on Alzheimer's disease using deep neural network approach

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Shiv Bharadwaj, Dong-Qing Wei

1854–1867 G-protein-coupled receptors function as logic gates for nanoparticle binding using systems and synthetic biology approach

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Xueying Mao, Cheng-Dong Li, Yan Li,  
Dong-Qing Wei, Shakti Sahi

1868–1878 Electrochemical single-step obtention and characterization of a biomimetic TiO<sub>2</sub>-HA NTs covered by chitosan

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Larissa Agostinho de Santa-Cruz,  
Paloma Bantim Barreto,  
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Antonio Marcos Helgueira de  
Andrade, Francisco José Moura,  
Marilza Sampaio Aguiar,  
Suzana Bottega Peripolli,  
José Brant de Campos,  
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Giovanna Machado

1879–1891 Development of multilayered biomimetic bone plates: In vitro release assessment

R. Seda Tığlı Aydın, Seda Uyanık

1892–1899 Nanostructured surface coatings for titanium alloy implants

Guy Louarn, Laetitia Salou,  
Alain Hoornaert, Pierre Layrolle

1900–1910 The mineralization of polymer electrospun fibrous membranes modified with tourmaline nanoparticles

Jinsheng Liang, Na Hui, Tianyu Zhao,  
Hong Zhang

1911–1921 Antimicrobial hydrogels with controllable mechanical properties for biomedical application

Si-Hao Chen, Zhi Li, Zu-Lan Liu,  
Lan Cheng, Xiao-Ling Tong,  
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1922–1930 Study of a luminescent and antibacterial biomaterial based on hydroxyapatite as support for an antineoplastic drug

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1931–1943 **Formation of aligned core/sheath microfiber scaffolds with a poly-L-lactic acid (PLLA) sheath and a conductive poly(3,4-ethylenedioxythiophene) (PEDOT) core**

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1944–1949 **Assessing the influence of silkworm cocoon's age on the physicochemical properties of silk fibroin-based materials**

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