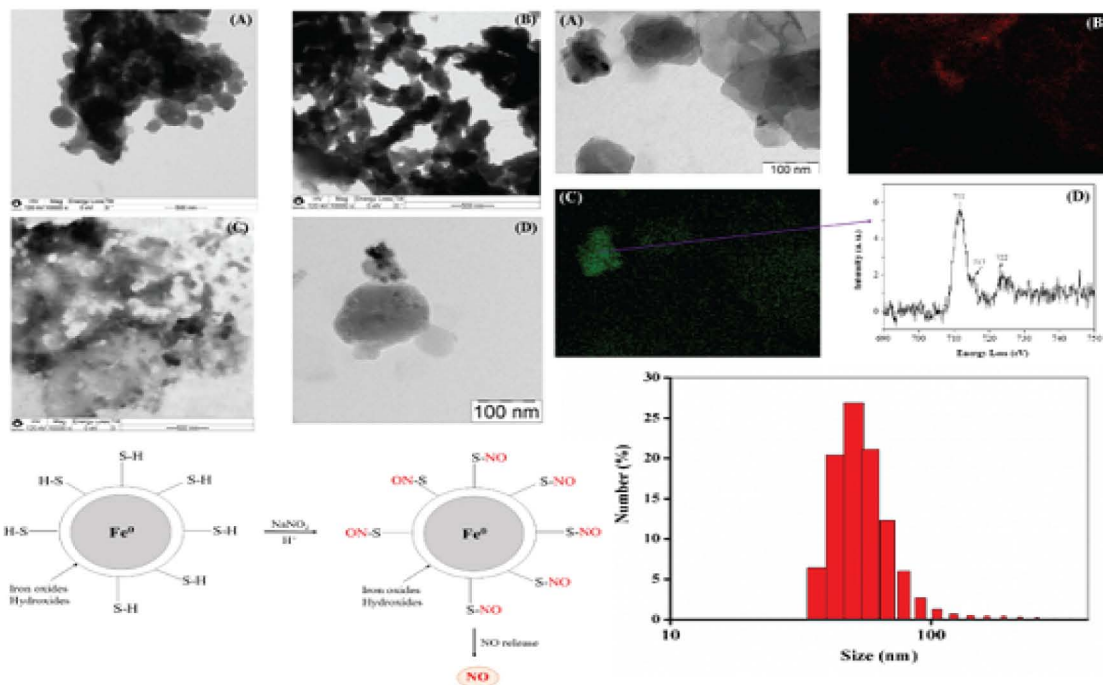


Mahboubeh Jafarkhani, et al., An overview on the experimental and mathematical modelings of angiogenesis and vasculogenesis



Bruna Santiago de Oliveira Silva et al., Characterization of iron nanoparticles produced with green tea extract: a promising material for nitric oxide delivery

## Editor in Chief

**Alexandru Mihai Grumezescu**

## Associate Editors

**Michael R Hamblin**, Harvard-MIT Division of Health Sciences and Technology, Cambridge, **United States**  
**Badal Kumar Mandal**, Environmental and Analytical Chemistry Division, School of Advanced Sciences, VIT University, **India**  
**Carmen Chifiriuc**, University of Bucharest, Faculty of Biology, Microbiology Immunology Department, **Romania**

## Assistant Editor

**Denisa Florea**, Faculty of Medical Engineering, University Politehnica of Bucharest, Romania  
**Valentina Grumezescu**, National Institute for Lasers, Plasma & Radiation Physics, Lasers Department, P.O. Box MG-36, Bucharest-Magurele, Romania  
**Florin Iordache**, Flow Cytometry and Cell Therapy Laboratory, Institute of Cellular Biology and Pathology "Nicolae Simionescu" (ICBP), Bucharest, Romania  
**Alexandra Elena Oprea**, Department of Science and Engineering of Oxide Materials and Nanomaterials, Faculty of Applied Chemistry and Materials Science, University Politehnica of Bucharest, Romania  
**Ioana Bălănuța**, AMG Transcend, Romania  
**Andreea Aiacoaboae**, Faculty of Medical Engineering, University Politehnica of Bucharest, Romania

## Editorial Board

- (1) **Howard I. Maibach**, Department of Dermatology, 90 Medical Center Way, Surge Building Room 110, University of California, San Francisco, CA 94143-0989, USA
- (2) **Anton Ficai**, Department of Science and Engineering of Oxide Materials and Nanomaterials, Faculty of Applied Chemistry and Materials Science, Politehnica University of Bucharest, Romania
- (3) **Carmen Limban**, University of Medicine and Pharmacy Carol Davila, Faculty of Pharmacy, Romania
- (4) **Christian Hellmich**, Institute for Mechanics of Materials and Structures, Faculty of Civil Engineering, Vienna University of Technology, Austria
- (5) **Evghenia Bezirtzoglou**, Democritus University of Thrace Faculty of Agricultural Development, Department of Food Science and Technology, Greece
- (6) **Frank Trixler**, Center for NanoScience & Department for Earth and Environmental Sciences, Ludwig-Maximilians Universität München, Germany; Open Research Laboratory, School of Education, Technische Universität München, Germany.
- (7) **Fu-Zhai Cui**, Laboratory of Advanced Materials, Department of Material Science and Engineering, Tsinghua University, Beijing, P.R. China.
- (8) **George Dan Mogosanu**, University of Medicine and Pharmacy, Craiova, Romania
- (9) **Jose Luis Balcazar**, Catalan Institute for Water Research, Girona, Spain
- (10) **Keng-Shiang Huang**, The School of Chinese Medicine for Post-Baccalaureate, I-Shou University, Ta-Hsu Hsiang, Taiwan
- (11) **Keng-Liang Ou**, College of Oral Medicine, Taipei Medical University, Taiwan
- (12) **M.V. Reddy**, Departments of Physics & Chemistry Graphene Center, Advanced Batteries Lab, National University of Singapore, Singapore
- (13) **Mariana Chirea**, University of Porto, Faculty of Science, Portugal
- (14) **Mihaela Badea**, University of Bucharest, Faculty of Chemistry, Romania
- (15) **Nazmiye Altintas**, Faculty of Medicine, Parasitology Department, Izmir, Turkey
- (16) **Rodica Cristescu**, National Institute for Lasers, Plasma and Radiation Physics, Laser Department, Laser – Plasma – Surface Interactions Laboratory, Magurele, Romania
- (17) **Veronica Lazăr**, University of Bucharest, Faculty of Biology, Microbiology Immunology Department, Romania
- (18) **Mazeyar Parvinzadeh Gashti**, Département de Chimie, Université Laval, 1045 Avenue de la Médecine, Québec, QC G1V 0A6, Canada
- (19) **Mohammad Mehdi Rashidi**, Department of Mechanical Engineering, Bu-Ali Sina University, Hamedan, Iran
- (20) **Mu. Naushad**, Department of Chemistry, College of Science, King Saud University, Riyadh, Saudi Arabia
- (21) **Piotr Lulinski**, Department of Organic Chemistry, Faculty of Pharmacy, Medical University of Warsaw, Poland
- (22) **Zhi Ping (Gordon) Xu**, Australian Institute for Bioengineering and Nanotechnology, The University of Queensland, Brisbane, QLD 4072, Australia
- (23) **Fang Xie**, Department of Materials, Imperial College, London, SW7 2AZ, United Kingdom
- (24) **Kateryna Kon**, Department of Microbiology, Virology, and Immunology of Kharkiv National Medical University, Ukraine
- (25) **Mahendra Kumar Rai**, Department of Biotechnology, SGB Amravati University, Amravati, Maharashtra, India
- (26) **Victoria Samanidou**, Department of Chemistry, School of Sciences, Aristotle University of Thessaloniki, Greece
- (27) **Yu Cao**, Key Laboratory of Pesticide and Chemical Biology (Ministry of Education), College of Chemistry, Central China Normal University, Wuhan P. R. China
- (28) **Shinichi Arakawa**, Graduate School, Department of Lifetime Oral Health Care Science, Tokyo Medical and Dental University (TMDU), Yushima, Bunkyo-ku, Tokyo, Japan
- (29) **Santiago Daniel Palma**, Instituto de Investigaciones para la Industria Química (INIQUI, Universidad Nacional de Salta – CONICET). Av. Bolivia 5150, 4400, Salta, Argentina
- (30) **Dan Mihaiescu**, Politehnica University of Bucharest, Faculty of Applied Chemistry and Material Science, Romania
- (31) **Zivile Luksiene**, Vilnius University, Inst. Applied Research, Sauletekio10, 10223, Vilnius, Lithuania
- (32) **Vladimir K. Ivanov**, Kurnakov Institute of General and Inorganic Chemistry of the Russian Academy of Sciences, Moscow, Russia
- (33) **Jhoan Toro Mendoza**, Centro de Estudios Interdisciplinarios de la Física, Instituto Venezolano de Investigaciones Científicas, Caracas, 1020 A, Venezuela
- (34) **Melinda Varga**, 3D Systems Packaging Research Center, Georgia Institute of Technology, Atlanta, GA, USA

## TABLE OF CONTENTS

<b>Special Issue</b>		
1183	Masoud Mozafari	<b>Editorial Preface: Special issue on functional surfaces for tissue engineering and regenerative medicine</b>
1185	Zahra Barabadi Esmacel Sharifi Mahmoud Azami Jafar Ai	<b>Copper-doped 45S5 bioglass nanoparticles for tissue engineering applications: A comparative study</b>
1190	Mahboubeh Jafarkhani Zeinab Salehi Pezhman Ghelich	<b>An overview on the experimental and mathematical modelings of angiogenesis and vasculogenesis</b>
1200	Newsha Jalali Zahra Rezvani Narendra Pal Singh Chauhan Masoud Mozafari	<b>Synthesis and characterization of surface-modified poly (lactide-co-glycolide) nanoparticles by chitosan molecules for on-demand drug delivery applications</b>
1203	Arash Ramedani Yeganeh Hatefi Masoud Mozafari	<b>Controlled delivery of cefixime trihydrate from organic-inorganic nanofiber composites</b>
1208	Amir SalatiHamid Keshvari Ghasem Ahangari Mohammad Hossein Sanati	<b>Process parameters optimization for tissue engineered chitosan/gelatin nanofibrous scaffolds</b>
1214	Amir Salati Ghasem Ahangari Hamid Keshvari Mohammad Hossein Sanati	<b>Modeling the effect of autoreactive T-cells on oligodendrocytes in multiple sclerosis patients using chitosan/gelatin nanofibrous scaffolds</b>
1222	Ali Samadikuchaksaraei Mazaher Gholipourmalekabadi Behrouz Farhadihosseiniabadi Zahra Rezvani Masoud Mozafari	<b>Carboxymethyl chitosan/forsterite bone tissue engineering scaffolds: correlations between composition and physico-chemical characteristics</b>

---

1229	Azadeh Sepahvandi Mahnaz Eskandari Fathollah Moztarzadeh	<b>Photoluminescence and decay characteristics of PEGylated long lasting nanophosphors for tissue engineering applications</b>
1236	Mohammad Hasan Barounian Saeed Hesaraki Asghar Kazemzadeh	<b>Effect of curing regime and maturation time on photopolymerisation and <i>in vitro</i> behavior of a polymeric light-cured calcium phosphate cement</b>
<b>Regular submission</b>		
1243	Lidia Raquel C. Aquino Ana Angélica M. Macêdo Antônio S. B. Sombra Cléber C. Silva	<b>Bone Cement: A Review</b>
1257	Mohammad Reza Mohammad Shafiee Mahboubeh Kargar	<b>Preparation of aryl sulfonamides using CuO nanoparticles prepared in extractive Rosmarinus Officinalis leaves media</b>
1263	Daniela A. Geraldo Paula Needham Nancy Chandia Ramiro Arratia-Perez Guido C. Mora Nicolás A. Villagra	<b>Green synthesis of polysaccharides-based gold and silver nanoparticles and their promissory biological activity</b>
1272	Halenur Altan Gul Tosun Mahmut Kus	<b>Effects of different accelerators on the setting time and physo-chemical properties of mineral trioxide aggregate</b>
1276	Kagakin Evgeniy I. Lapsina Polina V. Popova Anna N. Dodonov Vadim G.	<b>Synthesis and some properties of nanostructured Ni-Co alloys</b>
1280	Bruna Santiago de Oliveira Silva Amedea Barozzi Seabra	<b>Characterization of iron nanoparticles produced with green tea extract: a promising material for nitric oxide delivery</b>

---



---

---

1288	Dorota Bartusik David Aebisher Piotr Tutka	<i>In vivo</i> imaging studies of cytosine
1291	Dosadina Elina Eldarovna Kulmetyeva Margarita Anatolyevna Belov Alexey Alexeevich	The changing of enzymatic activity of hydrolases immobilized on natural polysaccharide matrix for purulent and burn wounds treatment during storing and exploitation
1299	Nacer Rezgui Moufida Aggouf Amel Aissaoui Chahra Bidjou-Haiour	Enhancing catalytic activity of lipases from <i>Candida cylindracea</i> and Pancreatic porc for glucose laurate synthesis
1303	V. Tamara Perchyonok Rafael Felitti Shengmiao Zhang	Chitosan bio-active designer materials and orthodontics: development and evaluation of novel materials as enamel protective agents
1308	Ortansa Csutak Alexandra Ghiță Tatiana Vassu	Production of biosurfactants by <i>Candida glabrata</i> CMGB35 and <i>Kluyveromyces</i> ( <i>Nakaseomyces</i> ) <i>delphensis</i> CMGB62 strains belonging to the <i>Nakaseomyces</i> clade

---

---