



MATERIALE PLASTICE

Plastic Materials
Elastomers
Synthetic Yarns and Fibers
Composite Materials
Synthesis, Characterization, Engineering
Applications in Medicine
Dental Medicine and Pharmacy

JUNE 2020

Print ISSN: 0025 - 5289/ Online ISSN: 2668 - 8220

<https://revmaterialeplastice.ro>
<https://doi.org/10.37358/Mat.Plast.1964>



REVISTA DE
CHIMIE SRL

MATERIALE PLASTICE, founded in 1964
edited by the society REVISTA DE CHIMIE S.R.L.
BUCURESTI ROMANIA

EDITORIAL BOARD

Editor-in-Chief

Horia IOVU

University Politehnica of Bucharest, ROMANIA

Deputy Editor-in-chief

Anton HADAR

University Politehnica of Bucharest, ROMANIA

Deputy Editor-in-chief

Kamel EARAR

Dunarea de Jos University of Galati, ROMANIA

MEMBERS

Robert ADAMS

Bristol University, UK

Iulian BIRSAN

University Dunarea de Jos of Galati, ROMANIA

Ilare BORDEASU

Politehnica University of Timisoara, ROMANIA

Igor CATIC

University of Zagreb, CROATIA

Alberto D'AMORE

University of Naples - SUN, Aversa, ITALY

Catalin FETECAU

University Dunarea de Jos of Galati, ROMANIA

Baki HAZER

Kapadokya University, TURKEY

Zonguldak Bülent Ecevit University, TURKEY

Cosmin JINESCU

University Politehnica of Bucharest, ROMANIA

Valeriu V. JINESCU

University Politehnica of Bucharest, ROMANIA

Piotr KURCOK

Centre of Polymer and Carbon Materials Polish Academy of Sciences, POLAND

Gad MAROM

The Hebrew University of Jerusalem, ISRAEL

Walter MICHAELI
Institut für Kunststoffverarbeitung Aachen, GERMANY

George PAPANICOLAOU
University of Patras, GREECE

Carmen RACLES
Petru Poni Institute of Macromolecular Chemistry, Iasi, ROMANIA

Loredana SANTO
University Tor Vergata, Roma, ITALY

Andrei SARBU
INCDCP-ICECHIM Bucuresti, ROMANIA

Ion SERES
S.C. PLASTOR S.A., Oradea, ROMANIA

Bogdan C. SIMIONESCU
Macromolecular Chemistry Institute P. Poni, Iasi, ROMANIA

Norbert STRIBECK
University of Hamburg, GERMANY

Mircea Sava TEODORESCU
University Politehnica of Bucharest, ROMANIA

Nicoleta TEODORESCU
University Politehnica of Bucharest, ROMANIA

Dumitru Mircea VULUGA
Organic Chemistry Center C.D. Nenitescu, Bucharest, ROMANIA

General Manager
Ion ANDRONACHE
Revista de Chimie SRL, Bucharest, ROMANIA

Publisher Chief
Gabriel-Lucian RADU
University Politehnica of Bucharest, ROMANIA

Manager
Alice CRISTEA
Revista de Chimie SRL

Computer Editing
Monica BALUTA
Revista de Chimie SRL

Impact factor 2019: 1.517

CONTENTS

ANDREEA IRINA BARZIC, RALUCA MARINICA ALBU, CRISTINA DELIA NECHIFOR, MIHAI POSTOLACHE, CRISTIAN LOGIGAN, DANA ORTANSA DOROHOI Surface Processing of Polyethylene Terephthalate for Orientation of Nematics in Display Devices.....	1
ION DURBACA, NICOLETA SPOREA, OVIDIU VASILE Assessment of the Acoustic Absorption Characteristics of Layered Composite Structures Obtained from Plates with Lignocellulosic Coatings (I).....	8
CRISTIANA EPURE, TEODORA ZECHERU, GABRIEL EPURE, CLAUDIU LAZAROAIE, OVIDIU IORGA, RAZVAN PETRE, GABRIELA NITA, MIHAIL MUNTEANU, DAN STOICA, ALBERT PLOSNITA, VALENTIN RADITOIU Composite Materials for Passive Antiradar Camouflage.....	15
ELENA VALENTINA STOIAN, MARIA CRISTIANA ENESCU, IVONA CAMELIA PETRE, RUXANDRA ELENA BRATU, VASILE BRATU, CARMEN OTILIA RUSANESCU Experimental Researches on the Behavior of Polypropylene Pipes at the Physical-Mechanical Testing.....	23
AIDA PETCA, SILVIUS NEGOITA, RAZVAN - COSMIN PETCA, OANA CALO, RUXANDRA DIANA SINESCU Ether-Based Polyurethane Foam for Vacuum-Assisted Closure (V.A.C.) of Complicated Postoperative Abdominal Wound Dehiscence.....	32
SILVIUS ALEXANDRU PESCARIU, CRISTINA TUDORAN, MARIANA TUDORAN, GHEORGHE NICUSOR POP, SORIN PESCARIU, ROMULUS TIMAR, BOGDAN ANDOR Advantages of Intra-Cardiac Polymer Coated Electrodes Leads in Patients with Diabetes Mellitus and Cardiovascular Implantable Electronic Devices.....	39
MIHAELA RALUCA CONDRUZ, ION MALAEL, IONUT SEBASTIAN VINTILA, MIHAIL PUSCAS CERNAT Manufacturing of Advanced Composite Wind Turbine Blades for Counter Rotating Vertical Wind Turbine.....	45
ANTARINIA CRACIUN, DOINA PRODAN, MARIANA CONSTANTINIUC, ANA ISPAS, MIUTA FILIP, MARIOARA MOLDOVAN, MINDRA BADEA, IOAN PETEAN, MARIA CRISAN Stability of Dental Composites in Water and Artificial Saliva	57
MANUELA MARIA IFTIME , MARIAN ANGHELOIU Ultrasonication - a Potential Method Toward Chitosan Hydrogels	67
LINA XU, LEI NIU Effect of Polypropylene Fiber on Frost Resistance of Cemented Soil	78
SORIN MURARU, MARIANA IONITA A Molecular Dynamics Study of Small Gas Molecules Diffusion Through Composite Polysulfone/Carbon Nanotube and Polysulfone / Graphene Membranes.....	87
IULIANA STOICA, ION SAVA, GEORGIANA BULAI, GEORGE STOIAN, MITACHI STRAT, SILVIU GURLUI, BOGDAN OPRISAN Development and Morphological Characterization of Novel Polyimide/Metal nano Hybrid Materials.....	94
HUSSAM AL HUSSEIN, HAMIDA AL HUSSEIN, MARIUS HARPA, CARMEN SIRCUTA, OVIDIU S. COTOI, ADRIAN MAN, RADU DEAC, HORATIU SUCIU, KLARA BRINZANIUC, DAN SIMIONESCU Subcoronary Technique for Orthotopic Implantation of Aortic Scaffold Reinforced with Polytetrafluoroethylene Strips in Sheep: A Pilot Study	104
FLORINA BUCUR, ADRIAN ROTARIU, LIVIU MATACHE, FLORIN BACIU, GABRIEL JIGA, EUGEN TRANA Experimental and Numerical Study on the Behavior of Dyneema® HB26 Composite in Compression.....	113
MAGDALENA BIRSAN, NELA BIBIRE, ALINA DIANA PANAINTE, OANA SILASI, PAULA ANTONOAEA, ADRIANA CIURBA, ANA CATERINA CRISTOFOR, MAGDALENA WROBLEWSKA, KATARZYNA SOSNOWSKA The Influence of the Preparation Method on the Characteristics of a New Cosmetic Gel Based on Hyaluronic Acid and Matrix-Forming Polymers	123
MADALINA ANCA MOLDOVAN (LAZAR),ADINA BIANCA BOSCA, RARES ROMAN, HORATIU ROTARU, CRISTINA PREJMEREAN, DOINA PRODAN, PAUL BERE, COSMIN COSMA, DANA FESTILA, MIRCEA CONSTANTIN GHERGIE Bone Reaction to a Newly Developed Fiber-reinforced Composite Material for Craniofacial Implants.....	131
ALEXANDRU IONUT PATRASCU, ANTON HADAR, STEFAN DAN PASTRAMA Structural Analysis of a Freight Wagon with Composite Walls.....	140

PATRICIA ISABELA BRAILEANU, IONEL SIMION, BENYEBKA BOU-SAID, DELIA ALEXANDRA PRISECARU, NICOLETA CRISAN	
Custom Hip Stem Additive Prototyping Using Smart Materials	152
IULIAN GABRIEL BIRSAN, VASILE BRIA, MARINA BUNEA, ADRIAN CIRCIUMARU	
An Experimental Investigation of Thermal Properties of Fabric Reinforced Epoxy Composites.....	159
ANDREI - DANIEL VOICU, ANTON HADAR, DANIEL VLASCEANU, DANIELA IOANA TUDOSE	
Vibrational Study of a Helicopter Tail Rotor Blade with Different Polymer Inner Core Materials.....	169
MARINA BUNEA, IULIAN GABRIEL BIRSAN, ADRIAN CIRCIUMARU	
An Experimental Study on the Low Velocity Impact Behavior of Hybrid Epoxy Composites	179
GEORGE ROIU, SIMONA CAVALU, ALIN TEUSDEA, OVIDIU FRATILA, DENISA A. PETRICAS-HEREDEA	
GEORGE ROIU, SIMONA CAVALU, ALIN TEUSDEA, DENISA A. PETRICAS-HEREDEA, OVIDIU FRATILA	
Assessment of Antibiotic Influence on Structural Modifications of Amniotic Membrane by FTIR Spectroscopy.....	191
CRISTIAN VILAU, MIRCEA CRISTIAN DUDESCU	
Investigation of Mechanical Behaviour of Expanded Polystyrene Under Compressive and Bending Loadings.....	199
ZUZANA MITAĽOVA, JULIÁNA LITECKÁ, DUŠAN MITAĽ, MARTA HARNIČÁROVÁ, JAN VALÍČEK, CRISTINA STEFANA MIRON-BORZAN, MARIAN BORZAN	
Destructive Testing of Wood Plastic Composite	208
SIMONA-NICOLETA MAZURCHEVICI, BOGDAN PRICOP, BOGDAN ISTRATE, ANDREI-DANUT MAZURCHEVICI, VLAD CARLESCU, CONSTANTIN CARAUSU, DUMITRU NEDELICU	
Technological Parameters Effects on Mechanical Properties of Biodegradable Materials Using FDM.....	215
IONEL DANUT SAVU, SORIN VASILE SAVU, NICUSOR-ALIN SIRBU, MIRELA CIORNEI, ROBERT CRISTIAN MARIN, DANIELA IOANA TUDOSE	
Laser Marking of PLA FDM Printed Products.....	228
CRISTIAN MARES, RAZVAN - IONUT POPESCU, AIDA PETCA, NICOLETA MARU, CATALIN DOGAROIU, RAZVAN - COSMIN PETCA	
Bisphenol-A and other Plastics: Review of Endocrine Disrupting Effects on Prostate Cancer.....	239
BOGDAN FLORIN TOMA, CONSTANTIN NANU, CEZAR POPESCU, RAZVAN VLADIMIR SOCOLOV, VASILE- EDUARD ROSU, STEFAN LUCIAN TOMA, LOREDANA MARIA HIMINIUC, SOLANGE TAMARA ROSU	
The Analysis with Finite Elements of the Elasto-plastic Behaviour of the Spinal Immobilizers - in the Case of Comminutive Fractures.....	253
CATALIN ADETU, VASILE NASTASESCU, ALINA ELENA ADETU, FLORIAN VLADULESCU	
Upon Using of Plastics Layer in Light Multilayered Armor.....	265
ALICE MURARIU, CIPRIAN DINU, DORIANA AGOP FORNA, VICTORITA STEFANESCU, GABI TOPOR, NORINA CONSUELA FORNA, SILVIA FOTEA, GABRIELA GURAU, CRISTINA IORDACHE	
Composite Resins - Multifunctional Restorative Material and Practical Approaches in Dental Field.....	276

