

revmaterialeplastice.ro

Vol. 57 / Number 1 / Year 2020

MATERIALE PLASTICE



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

MARCH 2020

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

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

 **REVISTA DE
CHIMIE SRL**

EDITORIAL BOARD

Publisher

HORIA IOVU

Politehnica University Bucharest

Publisher Assistant

Anton HADAR

Politehnica University Bucharest

Kamel EARAR

Dunarea de Jos University of Galati

MEMBERS

Ion ABABII

University of Medicine and Pharmacy
N. Testemitanu, Chisinau, REPUBLICA MOLDOVA

Robert ADAMS

Bristol University, UK

Iulian BIRSAN

University Dunarea de Jos of Galati, ROMANIA

Iiare BORDEASU

Politehnica University Timisoara, ROMANIA

Igor CATIC

University of Zagreb, CROATIA

Alberto D'AMORE

University of Naples - SUN, Aversa ITALIA

Catalin FETEAU

University Dunarea de Jos of Galati, ROMANIA

Cosmin JINESCU

University Politehnica Bucuresti, ROMANIA

Valeriu V. JINESCU

University Politehnica Bucuresti, ROMANIA

Gad MAROM

The Hebrew University of Jerusalem, ISRAEL

Walter MICHAELI

Institut fur Kunststoffverarbeitung Aachen, GERMANY

Meda Lavinia NEGRUTIU

University of Medicine and Pharmacy Victor Babes
Timisoara, ROMANIA

Norbert STRIBECK

University of Hamburg, GERMANY

George PAPANICOLAOU

University of Patras, GRECIA

Loredana SANTO

University Tor Vergata, Roma, ITALIA

Ion SERES

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

Bogdan C. SIMIONESCU

Macromolecular Chemistry Institute P. Poni,
Iasi, ROMANIA

Oleg SOLOMON

University of Medicine and Pharmacy
N. Testemitanu, Chisinau, REPUBLICA MOLDOVA

Mircea Sava TEODORESCU

Politehnica University Bucharest, ROMANIA

Nicoleta TEODORESCU

Politehnica University Bucharest, ROMANIA

Dumitru Mircea VULUGA

Organic Chemistry Center C.D. Nenitescu,
Bucharest, ROMANIA

General Manager

Ion ANDRONACHE

Manager

Alice CRISTEA

Revista de Chimie SRL

Publisher Chief

Gabriel-Lucian RADU

Politehnica University of Bucharest

Computer Editing

Monica BALUTA

CONTENTS

ANDREEA IRINA BARZIC, MARIUS SOROCEANU, RAZVAN ROTARU, VALERIA HARABAGIU, ROMEO CRISTIAN CIOBANU Optical Dispersion Characteristics of Polyvinyl Alcohol Reinforced with a Nanoceramic Filler.....	1
ANTONIS S. PERDIOU, ROZAN ALAM ELDIN, KARIN ROXANA HAJAJ, MIHAI ROMINU, COSMIN SINESCU, MEDA LAVINIA NEGRUTIU RADU MARCEL NEGRU, TAREQ HAJAJ A Comparative Evaluation of Stress Resistance Between Nano-hybrid Composite and Ormocer Restorations on Posterior Teeth - <i>in vitro</i> Study.....	8
ADELINA HRITUC, ANDREI MIHALACHE, MARIAN MARES, MARGARETA COTEATA, OANA DODUN, GHEORGHE NAGIT, LAURENTIU SLATINEANU Mechanical Behaviour of 3D Printed PLA Hollow Spherical Parts Under Axial Compression.....	13
OANA DODUN, LAURENTIU SLATINEANU, GHEORGHE NAGIT, MARIAN MARES, ADELINA HRITUC, MARGARETA COTEATA, IRINA BESLIU BANCESCU Mechanical Properties of Composites Reinforced with Textile.....	21
VASILIIY CHERKASOV, YUIY YURKIN, VALERIY AVDONIN, DMITRIY SUNTSOV Self-adhesion X-ray Shielding Composite Material of EPDM Rubber with Barite: Mechanical Properties.....	28
COSMIN MIHAI MIRITOIU, MARIUS MARINEL STANESCU, DUMITRU BOLCU Researches Regarding the Mechanical Properties of a New Hybrid Vegetal Resin	37
DANIEL V. STAN Considerations on the Drying of the Raw Material and Consequences on the Quality of the Injected Products	46
FLORIN SUSAC, FELICIA STAN Experimental Investigation, Modeling and Optimization of Circularity, Cylindricity and Surface Roughness in Drilling of PMMA Using ANN and ANOVA.....	57
ALEXEY VOLOTSKOY, YURIY YURKIN, VALERIY AVDONIN New Thermoplastic Damping Polymeric Materials Based on Ethylene-Vinyl Acetate.....	69
LEANDRO IORIO, LOREDANA SANTO, FABRIZIO QUADRIN, DENISE BELLISARIO, DAVID BENEDETTI, JACOPO AGNELLI Carbon Fiber Laminates with Interlaminar Carbon Nanotubes.....	80
LOREDANA SANTO, DENISE BELLISARIO, LEANDRO IORIO, CLAUDIA PAPA, FABRIZIO QUADRINI, DAVID BENEDETTI, JACOPO AGNELLI Composite Laminates with Recycled Carbon Fibres and Carbon Nanotubes.....	86
PAUL GHIOCA, RAMONA MARINA GRIGORESCU, LORENA IANCU, RODICA-MARIANA ION, MADALINA-ELENA DAVID, MIRCEA IOAN FILIPESCU, ELENA RAMONA ANDREI, BOGDAN SPURCACIU, CRISTIAN-ANDI NICOLAE, RALUCA GABOR Composites of Styrene-Butadiene Block-Copolymer Reinforced with Waste Printed Circuit Boards (WPCB).....	92
ANA-MIHAELA (FLOREA) GAVRILA, TANTA-VERONA IORDACHE, CATHERINE BRANGER, HUGUES BRISSET, KATRI LAATIKAINEN, ANA LORENA CIURLICA, ANAMARIA ZAHARIA, ANITA LAURA RADU, ALINA-ELENA COMAN, SIMONA FLOR, ANDREI SARBU The Effect of Monomers on the Recognition Properties of Molecularly Imprinted Beads for Proto-hypericin and Proto-pseudohypericin	100
ELENA VALENTINA STOIAN Researches Regarding the Compression of the Films Polymers in Composite System.....	112
ADRIANA-MARIANA BORS, ALINA-RUXANDRA CARAMITU, DORIAN MARIN, IOSIF LINGVAY The Hydrophilicity of Some Lacquers for Electrical Use.....	122
DUMITRU BOLCU, MARIUS MARINEL STANESCU, ION CIUCA, COSMIN MIHAI MIRITOIU, ALIN DINITA, ALEXANDRU BOLCU A Study Regarding the Mechanical Properties of a Hybrid Matrix with Various Volume Proportions of Dammar.....	133
MARC JM ABADIE, IULIAN MANOLE, CATALIN FETECAU Photosensitive Formulation for Additive Manufacturing-3D Printing.....	141

ANDREEA ELENA MUSTEATA, GEORGE PELIN, MIHAIL BOTAN, ADRIAN POPESCU, LORENA DELEANU	
The Behavior of Polymeric Blends (PP + PA6) in Tensile Tests.....	153
CONSTANTIN PLACINTA, TUDOR CRISTIAN PETRESCU, VLAD GHIZDOVAT, STEFAN ANDREI IRIMICIUC, DECEBAL VASINCU, MARICEL AGOP, VIOREL-PUIU PAUN	
Polymer Dynamics Through Group Invariance of SL(2R) – Type in a Fractal Paradigm.....	167
EMILIAN-IONUT CROITORU, CRISTIN-OLIMPIU MORARIU, ADRIAN SOICA, GHEORGHE OANCEA	
Composite Automobile Fender Impact Testing with a Spherical Ball.....	175
EDWIN SEVER BECHIR, MIRCEA SUCIU, FARAH BECHIR, FLORIN-DANIEL BERNEANU, ANAMARIA BECHIR, ADRIAN TOHATI	
Clinical Trial Concerning the Effectiveness of Two Types Dental Sealants in Children with Bruxism.....	191
VIRGIL GEAMAN, MIHAI ALIN POP, IRINEL RADOMIR, AUGUSTIN SEMENESCU, BOGDAN FLOREA, OANA ROXANA CHIVU	
The Influence of Thermal Behaviour to Composites Based on Cotton Tissue and Unsaturated Polyester Resin.....	197
OANA CELLA ANDREI, IOANA TARLUNGEANU, LIVIA ALICE TANASESCU, ADRIANA BISOC, MIHAI BURLIBASA, CATALINA FARCASIU, MAGDALENA NATALIA DINA, ADINA MAGDALENA BUNGET, RUXANDRA MARGARIT	
Deformation Resistance of Palatal Plate Connectors in Removable Partial Dentures.....	202
MARIA RADA, DELIA MIRA BERCEANU-VADUVA, MILAN DANIEL VELIMIROVICI, SIMONA DRAGAN, BIANCA BERCEANU-VADUVA, MARCEL MIHAI BERCEANU-VADUVA, MATILDA RADULESCU, CRISTINA TUDORAN, ANA MARIA PAH, DANA EMILIA VELIMIROVICI	
Research on the Effect of Aortic Valve Replacement with Mechanical Prosthesis on the Evolution of Ventricular Hypertrophy in Patients with Degenerative Aortic Stenosis.....	209
CATALIN GHEORGHE BEJINARIU, SIRAMONA POPESCU, SERBAN DRAGOSLOVEANU, CARMEN GIUGLEA, SILVIU ADRIAN MARINESCU	
Study on the use of polypropylene meshes for the correction of abdominal parietal defects during abdominoplasty.....	218
PUJA K GANGURDE, NAVYA AJITKUMAR BHASKARAN, RUCHI VERMA, JOBIN JOSE, LALIT KUMAR	
Analytical Method Development Using Central Composite Design for Estimation of Lamotrigine in Lipid Nanoformulation.....	223
RAUL GHIURCA, SMARANDA BUDURU, MARIUS BUD, RARES BUDURU, CRISTIAN CULCITCHI, MANUELA MANZIUC, LAURA ZAHARIA, ANCA MESAROS	
Adhesion Assessment Between Composites Using Three Different Protocols.....	236
IMRE KISS, ANDREI MIHAI BACIU, ILARE BORDEASU, LAVINIA MADALINA MICU	
Compressive Strength of Stripes and Flakes of Recycled Polyethylene Terephthalate (PET) Added Concrete	244
RALUCA MARIA VIERIU, OANA TANCULESCU, FLORENTINA MOCANU, SORINA MIHAELA SOLOMON, CARMEN SAVIN, DANA GABRIELA BOSINCEANU, ADRIAN DOLOCA, CRISTINA IORDACHE, GABRIELA IFTENI, IULIA SAVEANU¹	
In Vitro Study Regarding the Biomechanical Behaviour of Bone, Fibre Reinforced Polymer and Wire Composite Periodontal Splints. II. Model Analysis.....	253
ANDREI MIHAI BACIU, IMRE KISS, ILARE BORDEASU, LAVINIA MADALINA MICU	
Compressive Strength of Woven and Strand of Recycled Polyethylene Terephthalate (PET) Reinforced Concrete	263
ADINA OANA ARMENCIA, LOREDANA LILIANA HURJUI, CRISTINA CLAUDIA TARNICERIU, IULIA SAVEANU, CARINA BALCOS	
Tribological Behavior Simulation of Ceramic Material Using the Finite Element Analysis.....	272
IONUT SEBASTIAN VINTILA, TEODOR BADEA, SORIN DRAGHICI, HORIA ALEXANDRU PETRESCU, ANDREIA CUCURUZ³, HORIA IOVU, ANTON HADAR	
Mechanical Characterization of DCPD and ENB Healing Systems in Glass Fibre Composites	278
SORIN DRAGHICI, IONUT SEBASTIAN VINTILA, RADU MIHALACHE, HORIA ALEXANDRU PETRESCU, CATALIN STELIAN TUTA, ANTON HADAR	
Design and Fabrication of Thermoplastic Moulds for Manufacturing CFRP Composite Impeller Blades.....	290

RUXANDRA MARGARIT, LIVIA ALICE TANASESCU, DANA BODNAR, CAMELIA GABRIELA ION, MIHAI BURLIBASA, ADRIANA BISOC, CATALINA FARCASIU, MAGDALENA NATALIA DINA, OANA CELLA ANDREI	
Comparison of Fracture Resistance of Teeth Presenting Non-Carious Cervical Lesions, Restored with Different Composite Materials.....	299
RALUCA ELENA GINGHINA, DIONEZIE BOJIN, TUDOR VIOREL TIGANESCU, NICOLETA PETREA, SIMONA BUNGAU, DANUT-EUGENIU MOSTEANU	
Research on the Efficiency of Testing a New Adsorbent Material with Cellulose Structure for the Depollution of Waste Water.....	306
IONUT LUCHIAN, STEFANA NANU, IOANA MARTU, MARIA-ALEXANDRA MARTU, GIORGIO NICHITEAN, DIANA-CRISTALA KAPPENNERG-NITESCU, GABRIELA GURAU, VICTORITA STEFANESCU, LILIANA PASARIN, MONICA TATARCIUC, SORINA-MIHAELA SOLOMON	
The Influence of the Composite Resin Material on the Clinical Working Time in Fiberglass Reinforced Periodontal Splints.....	316
CRISTIAN CONSTANTIN BUDACU, MAGDA-ECATERINA ANTOHE, VICTOR COSTAN, GHEORGHE RAFTU, GABRIELA GURAU, LILIANA LACRAMIOARA PAVEL, VICTORITA STEFANESCU	
The Improvement of Polymer Structure Related to Radical Treatment of Alveolar Abscesses.....	321
RALUCA MAIER	
Study on Increasing Performances of Hybrid Composite Through Pull Out Compression Test Assesment	329