

CONFERENCE PROCEEDINGS CONTENTS

MICRO AND NANO TECHNOLOGIES

- 1. A BIOBASED NANO/MICRO-STRUCTURED MATERIAL FOR MICROORGANISMS' IMMOBILIZATION**, Drd. Emanuel Gheorghita Armanu, Dr. Eng. Marius Sebastian Secula, Prof. Dr. Habil. Eng. Nicanor Cimpoesu, Dr. Hermann J. Heipieper, Prof. Dr. Habil. Eng. Irina Volf.....3
- 2. CLASSIFICATION OF NANOBEARINGS AND MATHEMATICAL FORMULATION OF THEIR OPERATION**, Prof. Dr. Alexander Vorobyov, PhD Ress. Kirill Vorobyev, Prof. Dr. Zhamaletdin Mamasaidov, PhD Ress. Alawiyeh Mohamad Ali, Assoc. Prof. Dr. Tatiana Chekushina 11
- 3. COMPARISON OF SURFACE PLASMON RESONANCE RESPONSES FROM THREE DIFFERENT SENSOR STRUCTURES**, Ing. Dominik Jursa, doc. Dr. Ing. Michal Lesňák, Ing. Marek Miskay, doc. RNDr. Barčová Karla, Ph.D. 17
- 4. DEVELOPMENT OF METAL-POLYMER LAMINATE WITH HIGH MECHANICAL PROPERTIES**, Dr. Giorgi Baliashvili, Dr. Sophiko Kvinikadze, Dr. Tamar Iashvili, Davit Tsverava, Aleksandre Vanishvili25
- 5. DEVELOPMENT OF RECOMMENDATIONS ON THE APPLICATION OF CORROSION-RESISTANT NANO-CEC FOR HEC WATER PUMPS PROTECTION**, PhD Aiman Kemelzhanova, Gulsara Zhamanbayeva, PhD Rustem Atchibayev, PhD Sandugash Kemelzhanova33
- 6. CORROSION DISSOLUTION OF AN IMPLANT MADE OF NZ30K ALLOY ALLOYED WITH Ag AND COATED WITH A LAYER OF SILVER IN A MODEL SOLUTION OF THE OSTEOSYNTHESIS PROCESS**, Prof. Viktor Greshta, Prof. Oleksii Narivskyi, Assistant Anna Dzhus, Assoc. Prof. Vasyl Vynar, PhD Oleksandr Kuprin41
- 7. EFFECT OF ZINC OXIDE NANOPARTICLES AGAINST PHYTOPHTHORA SPP. CAUSING DURIAN DISEASES IN VITRO**, Dr. Kanchalar Keeratirawee, Assoc. Prof. Dr. Pornprapa Kongtragoul, Miss Sansanee Pantakan51
- 8. EVALUATION AND PREDICTION OF RESISTANCE OF PLATE-LIKE HEAT EXCHANGERS MADE OF 06KhN28MDT ALLOY (ANALOGOUS TO AISI904L STEEL) TO CREVICE CORROSION IN RECYCLED WATER OF ENTERPRISES**, Assistant Dzhus A.V., Prof. Dr. Greshta V.L., Prof. Dr. Pulina T.V., Prof. Dr. Snizhnoi G.V.59

9. POLYLACTIC ACID/ZINC OXIDE NANOSTRUCTURED FIBROUS MATERIAL BY NEEDLELESS ONE SOLVENT ELECTROSPINNING FOR PROTECTION AGAINST TICK-BORNE DISEASES, Liga Rampane, Zane Zelca, Chaima Salmi	69
10. RESEARCH OF THE PROTECTION OF CHILDRENS RESPIRATORY TRACTS WITH THE AIM OF ESTABLISHING STANDARDS FOR THE PRODUCTION OF CHILDRENS RESPIRATORS USING NANOMATERIALS, Ing. Ruzena Langova, Ing. Melanie Barabasova, doc. Ing. et Ing. Karel Klouda, CSc., Ph.D.	77
11. SIMULATION AND OPTIMIZATION OF EQUIPMENT FOR UNLOADING LONG METAL BARS, Assoc. Prof. Dr. Paul Ciprian Patice, Dr. Gabriela Măntescu.....	85
12. IMPACT OF COLLOIDAL PROPERTIES OF PHOSPHORUS-BASED NANOFERTILIZERS IN FOLIAR APPLICATION ON PRODUCTION PARAMETERS, PHYSIOLOGY, AND MINERAL NUTRIENT CONTENT OF SUNFLOWER, Assoc. Prof. Dr. Marek Kolenčík, Asst. Prof. Dr. Dávid Ernst, Assoc. Prof. Dr. Martin Šebesta, PhD Viktor Straka, Assoc. Prof. Dr. Ľuba Ďurišová	95
13. ZINC OXIDE NANOPARTICLES INHIBIT SOME FUNGAL PATHOGENS INFECTION ON DURIAN SEEDLINGS, Assoc. Prof. Dr. Pornprapa Kongtragoul, Miss Sansanee Pantakan	107

ADVANCES IN BIOTECHNOLOGIES

14. AIR QUALITY TRENDS IN LIVESTOCK BARNS, Assist. Prof. Dr. Kristina Dineva, Prof. Dr. Tatiana Atanasova, Dr. Victor Danev	117
15. ANTIMICROBIAL POTENTIAL OF METHANOLIC AND N-HEXANE EXTRACTS OF VISCUM ALBUM, Assoc. Prof. Dr. Marioara Nicoleta Caraba, Lecturer dr. Ion Valeriu Caraba, Prof. Dr. Gabi Dumitrescu, Prof. dr. Elena Pet, Prof. Dr. Roxana Popescu	125
16. CHEMOMETRIC PROFILE OF WHITE AND RED WINES FROM DIFFERENT AREAS OF ROMANIA, Drd. Petronela Anca Onache, Dr. Alina Florea, Prof. Dr. Dorin Ioan Sumedrea, Prof. Dr. Ovidiu Tița.....	133
17. COMPARATIVE STUDY ON PHENOLICS, FLAVONOIDS, TANNINS AND ANTIOXIDANT PROPERTIES OF CALENDULA OFFICINALIS EXTRACTS OBTAINED BY DIFFERENT EXTRACTION TECHNIQUES, Lucia-Florina Popovici, Simona Oancea.....	141

18. DEVELOPMENT OF A METHOD FOR PRODUCING A FEED ADDITIVE FROM THE GREEN MASS OF AMARANTH , Svetlana Valerevna Obraztsova, Olga Vladimirovna Bondareva, Dariya Sergeevna Khodasevich, Assistant professor Olga Leonidovna Meshcheryakova, Assistant professor Tatiyana Vasilevna Sviridova, Professor Olga Sergeevna Korneeva	149
19. EVALUATION OF THE EFFICIENCY AND INTENSITY OF HOMOGENIZATION BY CHANGING THE GEOMETRY OF THE TURBINE IMPELLER BLADES , DSc., University Prof. Igor Korobiichuk, Ph.D., Assoc. Prof. Vladyslav Shybetskyi, Ph.D., Assoc. Prof. Sergii Kostyk, Ph.D., Myroslava Kalinina, Dariia Hunchenko, Zhanna Korobiichuk.....	157
20. EVALUATION OF THE PROPERTIES OF YOGURT ENRICHED WITH CRUDE POLYSACCHARIDES OBTAINED FROM DIFFERENT MUSHROOMS , Dr. Oana Popa, Prof. Dr. Ovidiu Tița.....	165
21. GLYCEROL-BASED FERMENTATION BY PLANT GROWTH PROMOTING ASPERGILLUS NIGER FOR ITS FURTHER FORMULATION AND APPLICATION IN TOMATO GROWTH , Nikolay Vassilev, Luis García del Moral Garrido, Vanessa Martos Nuñez, Giuseppe Falvo D'Urso Labate, Maria Vassileva.....	173
22. RESEARCH ABOUT THE BEST SWEETENERS USED TO DESIGN A FOOD SUPPLEMENT WITH HIGH ANTIOXIDANT POTENTIAL , PhD Constantin Butoi, PhD Alexandra Ioana Ionescu	183
23. STUDY OF PROPERTIES OF GLUCOSE OXIDASE IMMOBILIZED ON MODIFIED WITH CHITOSAN AND SODIUM TRIPOLYPHOSPHATE MAGNETITE , Prof. Dr. Valentina G. Matveeva, Assoc. Prof. Ph.D. Boris B. Tikhonov, Mr. Daniil R. Lisichkin, Prof. Dr. Ajay Sh. Desai, Prof. Dr. J.C.S. dos Santos	191
24. STUDY REGARDING THE BEST SWEETENERS USED IN GREEN-TEA BASED SUPPLEMENTS , PhD. Ress. Alexandra-Ioana Ionescu, PhD. Ress. Constantin Butoi.....	199
25. THE INFLUENCE OF APPLE VARIETIES AND THE ENZYMES ROHAPECT PTE-100 AND PECTINASE ON THE OBTAINING OF APPLE JUICES , Denisa Marica (Sopîrlă), Maria Lidia Iancu, Ovidiu Tița.....	207
26. THE POTENTIAL OF OLIVE POMACE BIOCHAR FOR METAL RETENTION , Prof. Dr. Paulo Mourao	215

GREEN BUILDINGS TECHNOLOGIES AND MATERIALS

27. CHARACTERISTIC STUDY OF ARTIFICIAL FLY ASH SAND AS A REPLACEMENT TO NATURAL RIVER SAND FOR MINIMIZING THE ENVIRONMENTAL IMPACT OF SAND MINING, Abhishek Khupsare, Ajay K. Agarwal, Swapnil P. Wanjari	225
28. EVALUATION OF THE INITIAL VOLUME STABILITY OF CURRENT CEMENTS, Dr. Božena Dohnálková, Dr. Jiří Grošek, Tomáš Zavřel, Dr. Theodor Staněk	239
29. FLUOROGRAPHENE-DOPED MAGNESIUM OXYCHLORIDE CEMENT COMPOSITES FOR CONSTRUCTION, Ing. Martina Záleská, Ph.D., prof. Ing. Milena Pavlíková, Ph.D., Ing. Adam Pivák, Ph.D., prof. Ing. Zbyšek Pavlík, Ph.D., prof. Ing. Ondřej Jankovský, Ph.D.....	247
30. FUNCTIONALITY OF TWO-COAT SYSTEM FOR CONCRETE PROTECTION AND REPAIR, Prof. Ing. Zbyšek Pavlík, Ph.D., Ing. Adam Pivák, Prof. Ing. Milena Pavlíková, Ph.D.....	255
31. IMMOBILISATION OF HEAVY METALS IN FLY ASH-DIATOMITE MODIFIED MAGNESIA CEMENT COMPOSITE, Ing. Adam Pivák, prof. Ing. Milena Pavlíková, Ph.D., Ing. Martina Záleská, Ph.D., assoc. prof. Mgr. Jana Nabelková, Ph.D., prof. Ing. Zbyšek Pavlík, Ph.D.....	263
32. IMPROVEMENT OF PHYSIOLOGICAL DATA COLLECTION BY IMPROVING SENSOR ACCURACY BASED ON THE SENSOR LOCATION, PhD Angel Dogeanu.....	271
33. POLYMERIC COATING FOR THE INSULATION, PROTECTION AND SURFACES FINISHING OF THE REINFORCED BUILDINGS CONCRETE EXPOSED TO CORROSIVE ENVIRONMENTS, Prof. dr. ing. hab. Ion Rusu, Senior Lecturer dr. chem. Loredana Judele, Assoc. prof. dr. ing. hab. Daniel Lepadatu	279
34. RETROREFLECTIVE GUARDRAIL BEAMS TO IMPROVE TRAFFIC SAFETY, Dr. Jiří Grošek, Dr. Michal Janků, Jakub Motl, Leo Jeniš	287
35. SOLID RESIDUES FROM THE COBUSTION OF BIOMASS – HEAVY METALS CONTAMINATION AND POSSIBLE REUSE, Prof. Ing. Milena Pavlíková, Ph.D., Ing. Martina Záleská, Ph.D., Assoc. Prof. Mgr. Jana Nábělková, Ph.D., Ing. Adam Pivák, Prof. Ing. Zbyšek Pavlík, Ph.D.	295
36. STUDY OF REACTION TO FIRE IN HYBRID BASED CORE INSULATORS INTENDED FOR THE OF VACUUM INSULATION PANELS, Prof. Ing. Jiří Zach, Ph.D., Ing. Petra Zachová, Ing. Jitka Peterková, Ph.D., Ing. Vítězslav Novák, Ph.D., Bc. Jindřich Havelka.....	303

37. SUSTAINABILITY ANALYSIS OF COPPER SLAG AND REPLACEMENT FOR CONCRETE , María José Pérez Verbal, Marcos Diaz González, Andrés Gabriel César Torres, Dr. Mauricio Pradena-Mique	311
38. THE ASSESSMENT OF STRENGTH PROPERTIES OF HISTORICAL MORTARS FOR SUSTAINABLE RENOVATIONS , Eng. Jaroslav Pokorný, Ph.D., Doc. Eng. Jan Fořt, Ph.D., Eng. Lenka Scheinherrová, Ph.D., Eng. Tomáš Navara, Eng. David Javorský	319
39. THE EFFECT OF DIFFERENT DEGRADATION ENVIRONMENTS ON CHLORIDE CONTENT AND CARBONATION IN CONCRETE , Dipl. Eng. et Dipl. Eng. Kristýna Hrabová, Ph.D., Dipl. Eng. Dita Vořechovská, Ph.D., Dipl. Eng. Tomáš Mazán, Dipl. Eng. Dominik Lisztwan, Dipl. Eng. Dalibor Kocáb, Ph.D., Prof., RNDr. Pavla Rovnaníková, CSc., Assoc. Prof., Dipl. Eng. Petr Konečný, Ph.D.	325
40. UNSTEADY STATE THERMAL ANALYSIS OF GLULAMINATED TIMBER ELEMENTS SUBJECTED TO FIRE , Lecturer Dr. Ing. Ruxandra Erbaşu, Assist. Dr. Ing. Ioana Teodorescu, PhD Ress. Andrei Sabău, Lecturer Dr. Ing. Daniela Țăpuși	333

GREEN DESIGN AND SUSTAINABLE ARCHITECTURE

41. BIM APLICATIONS IN THE DESIGN OF DEEP FOUNDATIONS FOR WIND TURBINES , Bogdan Chelaru, Cătălin Onuțu, Adrian Alexandru Șerbănoiu.....	343
42. BIM STRATEGY, IMPLEMENTATION AND EXPECTATIONS IN EDUCATIONAL PROGRAM , Lect. Dr. Marina Lute, Lect.Dr. Luminita Fekete-Nagy	351
43. DIGITAL TWIN OF BRATISLAVA CITY FOR ESTIMATION OF SUSTAINABLE ENERGY PRODUCTION AND UTILIZATION , Ing. arch. March. Roman Hajtmanek, PhD. Univ. Assoc. Prof., Mgr. art. Martin Uhrík, PhD. Assoc. Prof., Ing. arch. Vladimír Hain, PhD. Univ. Assoc. Prof., Ing. arch. Alexander Kupko	357
44. THE EFFECTIVENESS OF THE RECONSTRUCTION OF HISTORIC COUNTRY HOUSES , Ing. Arch. Jaroslava Rolínková.....	365
45. EVOLUTION AND DISTRIBUTION OF GREEN COVER AND ITS INFLUENCE ON URBAN PLANNING, THE CASE OF THE HISTORIC CENTRE OF LOJA, ECUADOR , Assoc. Prof. Valarezo-Jaramillo Sandra, Assoc. Prof. Aguirre-Maldonado Eduardo, Assoc. Prof. Dr. Balcázar-Arciniega Cristian, Assoc. Prof. Alvarado-Rodríguez Lorena	373

46. ILHA DE MOÇAMBIQUE AND ITS BUFFER ZONE – PROPOSAL FOR A LANDSCAPE STRUCTURE , Assist. Prof. Dr. Rute Sousa Matos, Assist. Prof. Dr. Paula Simões, Assist. Prof. Dr. Desidério Batista	381
47. INFLUENCE OF A FACADE BASED ON GABIONS AND PLANTS ON THE INDOOR AIR TEMPERATURE IN A TROPICAL CLIMATE OF THE AMAZON REGION , PhD. Balcázar- Arciniega, Cristian, Arq. Román- Vargas, Patricio, Assoc. Prof. Aguirre- Maldonado, Eduardo, Assoc. Prof. Valarezo- Jaramillo, Sandra, Assoc. Prof. Alvarado- Rodríguez, Lorena	389
48. MARGINAL CONDITIONS FOR MEASURING THE LIGHT TRANSMISSION OF WINDOWS , Ing. Dagmar Richtrová, Doc. Ing. Lenka Prokopová, Ph.D, Doc. Ing. Daniela Bošová, Ph.D.	397
49. NATURE A CONSTANT INSPIRATION FOR HUMAN BEINGS – AESTHETIC CHANGES IN ARCHITECTURE OVER THE CENTURIES , M. Eng. Arch. Ewa Kuhnert,	403
50. THE METHODOLOGY OF TECHNICAL DUE DILIGENCE FOR THE REHABILITATION OF AN ABANDONED BUILDING , Bogdan Chelaru, Cătălin Onuțu, Adrian Alexandru Șerbănoiu	409
51. VALORIZATION OF THE LANDSCAPE THROUGH THE APPLICATION OF MODERN ENERGY SOLUTIONS FOR THE CONSTRUCTION OF GREEN BUILDINGS AND THE DEVELOPMENT OF GREEN ARCHITECTURE , Assoc. Prof. Dr. Metodi Ivanov.....	417

SPACE TECHNOLOGIES AND PLANETARY SCIENCES

52. A SCIENTIFIC AND ENGINEERING APPROACH FOR PLANETARY LAVA TUBES EXPLORATION , Homero Aguilar Diaz, Gustavo Jamanca-Lino, Yury Vasquez Charcape, Daniel Suarez Zelada	429
53. ANALYSIS OF GEOMAGNETIC DATABASES IMPACTING SPACE WEATHER , Dr. Laurentiu Asimopolos, Dr. Natalia-Silvia Asimopolos, Dr. Vijdea Anca-Marina, Dinu Luminita, Assist. Prof. Adrian-Aristide Asimopolos.....	441
54. EXPENDITURE OPTIMAL CONTROL FOR A SATELLITE MOVING CLOSE TO THE LIBRATION POINT , Prof. DSc. L. K. Babadzanjan, Assoc. Prof. Dr. I. Yu. Pototskaya, Assoc. Prof. Dr. Yu. Yu. Pupysheva, Assoc. Prof. Dr. V. S. Korolev	451
55. LANDSLIDE SUSCEPTIBILITY MAPPING IN LUNAR SOUTH POLE REGION , Andrea Ermini, Assoc. Prof. Riccardo Salvini, Full Prof. Pier Simone Marrocchesi	459

56. PROSPECT AND PROVOCATION OF SUSTAINABLE LUNAR ACTIVITIES, Dr. eng. cosm. Dumitru-Dorin Prunariu, Prof. dr. eng. habil. Ildiko Tulbure	467
57. SUSTAINABLE AEROSPACE PROPULSION: THE SPINLOOP ROTARY ACCELERATOR WITH MAGNETIC LEVITATION FOR LOW EARTH ORBIT VEHICLE DEPLOYMENT, Piotr Mamczura, Dawid Pekala	471