

# The 14<sup>th</sup> ECerS Conference for Young Scientists in Ceramics

## Oral Presentations

*Preliminary List of Participants (15<sup>th</sup> June, 2021)*

### Advanced Ceramics

1. András Sápi, László Nagy, Zoltán Kónya,  
*University of Szeged, Szeged, Hungary*  
**Catalytic bricks for flue gas treatment in fireplaces**
2. Aimee Coleman, Dr Lilly Liu and Dr Joe Kelleher  
*University of Bristol, ISIS; Rutherford Appleton Laboratory, Harwell, Bristol, United Kingdom*  
**MAX-phases: Advanced ceramics with unusual properties for nuclear application**
3. Francesco Picelli, Jan Hostaša, Valentina Biasini, Andreana, Piancastelli, Laura Esposito  
*Institute of Science and Technology for Ceramics, Italian National Research Council, Faenza, Italy*  
**Effect of powder treatment on optical quality of transparent ceramics**
4. Alejandro Montón Zarazaga, Mohamed Abdelmoula, David Grossin, Francis Maury, Gökhan Küçüktürk,  
Marc Ferrato  
*CIRIMAT, Toulouse, France*  
**Powder bed selective laser processing of silicon carbide**
5. Zrinka Švagelj, Vera Rede, Vilko Mandić, Lidija Čurković  
*Faculty of mechanical engineering and naval architecture, Faculty of chemical engineering and technology, Zagreb, Croatia*  
**Immobilization of titania onto alumina foam for photocatalytic degradation of micropollutant**
6. Mohamed Eid Saied Abdelmoula, Gökhan Küçüktürk, Enrique Juste, Fabrice Petit  
*Department of Mechanical Engineering, Gazi University, Ankara, Turkey*  
**Scanning strategies investigation for direct powder bed selective laser processing of alumina**
7. Owais Aqtash, András Sápi  
*University of Szeged, Szeged, Hungary*  
**Ceramic based catalyst characterization**
8. Nicolas Somer, Florian Jean, M. Lasgorceix, Anthony Thuault, Cathy Delmotte, Nicolas Preux, Fabrice  
*LMCPA/Université Polytechnique Hauts-de-France, Maubeuge, France*  
**Fabrication of doped  $\beta$ -tricalcium phosphate bioceramics by robocasting for bone repair applications**
9. Mohammed Tihthi, Jamal Eldin F. M. Ibrahim, Emese Kurovics, László A. Gömze  
*Institute of Ceramics and Polymer Engineering, University of Miskolc, Miskolc, Hungary*  
**BaTiO<sub>3</sub>-reinforced Al-matrix ceramic composites: Structural, microstructural and temperature dependence of thermal conductivity**
10. Nicole Bartek, Vladimir V. Shvartsman, Soma Salamon, Heiko Wende, Doru C. Lupascu  
*Institute for Materials Science and Center for Nanointegration Duisburg-Essen (CENIDE), University of*

*Duisburg-Essen, Essen, Germany*

*Faculty of Physics and Center for Nanointegration Duisburg-Essen (CENIDE), University of Duisburg-Essen, Duisburg, Germany*

**Modulation of the properties of multiferroic  $\text{Pb}(\text{Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$  ceramics by changing the calcination and sintering temperatures**

11. Owais Aqtash, András Sápi

*University of Szeged, Szeged, Hungary*

**Ceramic based catalyst characterization**

12. Srikanth Batna

*Bombay, India*

**Residual stress measurements on thermal barrier coating systems using spectroscopic techniques**

13. Maliha Siddiqui, David Salamon

*CEITEC BUT, Brno University of Technology, Brno, Czech Republic*

**Role of  $\text{Ca}^{2+}$  doping on phase stability of freeze-casted hydroxyapatite**

14. Elena Mirabela Soare, Catalina Stanciu, Adrian Surdu, Roxana Trusca, Roxana Patru, Adelina Carmen Ianculescu

*Institute of Physical Chemistry "Ilie Murgulescu", University Politehnica of Bucharest, Bucharest, Romania*

**Microstructure and dielectric proprieties of sol-gel  $\text{BaTa}_{1-x}\text{Hf}_x\text{O}_3$  ceramics**

15. Serhiy Yushkevych, O.A. Korniienko, A.V. Sameljuk, O. I. Bykov

*Frantsevich Institute for Problems of Materials Science, Ukraine NASU, Kiev, Ukraine*

**Phase relation studies in the  $\text{CeO}_2$ - $\text{La}_2\text{O}_3$ - $\text{Yb}_2\text{O}_3$  system at 1500 °C**

16. Said Talbaoui, Hassan Grimech

*Faculty of Sciences and Technics, Azilal, Morocco*

**Theoretical modeling of vibrational properties interfaces and metallic surfaces in orderly cfc structures following high symmetry directions**

17. Maria Parfenova, Vera Vorobjeva, Anna Zelenaya, Vasily Lutsyk

*Institute of Physical Materials Science SB RAS, Ulan-Ude, Russian Federation*

**3D-printing of exploded T-x-y diagrams prototypes to correct experimental and thermodynamic interpretations:  $\text{Al}_2\text{O}_3(\text{TiO}_2)$ - $\text{SiO}_2$ - $\text{ZrO}_2$  & Ag-Cu-Ni**

18. Adrian Graboś, Paweł Rutkowski, Jan Huebner, Dariusz Kata, Bogdan Sapiński, Marek Faryna

*AGH University of Science and Technology, Kraków, Poland*

**Dense KNN polycrystals doped by  $\text{Er}_2\text{O}_3$  obtained by hot pressing with hexagonal boron nitride protective layer**

19. Veronika Buinevich, V.S. Buinevich, A.A. Nepapushev, G.V. Trusov, D.O. Moskovskikh

*National University of Science and Technology MISiS, Moscow, Russia*

**Combustion synthesis (CS) and spark plasma sintering (SPS) of promising ultra-high temperature ceramic material based on hafnium carbonitride for advanced spacecraft**

20. Ivana Dinic, Marina Vukovic, Marko Nikolic, Lidija Mancic

*Institute of Technical Sciences of SASA, Belgrade, Serbia, Belgrade, Serbia*

**Solvothermal synthesis of  $\text{NaGdYF}_4$ :Yb,Er UCNPs with different structural, morphological and optical properties**

21. Ambra Paterlini, A. Stamboulis, V. Turq, R. Laloo, M. Schwentenwein, G. Bertrand  
*Pergine Valsugana, Italy*  
**Lithography-based manufacturing of advanced ceramics: Wear analysis and the formation of tribofilm**
22. Boussebha Hamza, Sinan Bakan, Ali Osman Kurt  
*Sakarya University Research and Development Center, Sakarya, Turkey*  
**Dynamic thermochemical method in the synthesis of AlON and MgAlON powder at a moderate temperature**
23. Tímea Hegedűs, Dóra Takács, Lívia Vásárhelyi, Cora Bartus Pravda, Szilárd Sáringer, István Szilágyi, Zoltán Kónya  
*University of Szeged, Szeged, Hungary*  
**Synthesis and characterization of boron nitride nanostructures**
24. Daria Gierszewska, Sebastian Wachowski, Iga Szpunar, Aleksandra Mielewczyk-Gryń, Maria Gazda  
*Gdańsk University of Technology, Gdańsk, Poland*  
**Structural and electrical properties of Fe- or Lu-doped barium lanthanum cobaltite ( $\text{Ba}_{0.5}\text{La}_{0.5}\text{CoO}_{3-\delta}$ )**
25. Ann-Katrin Fetzer, Andreas Wohninsland, Lalitha Kodumudi Venkataraman, Hans-Joachim Kleebe  
*Department of Materials and Earth Sciences, Technical University of Darmstadt, Darmstadt, Germany*  
**In situ transmission electron microscopy study on the phase transitions in quenched  $\text{Na}_{1/2}\text{Bi}_{1/2}\text{TiO}_3$ - $\text{BaTiO}_3$  ceramics**
26. Svetlana Butulija, Bratislav Todorović, Sanja Petrović, Aleksandra Dapčević, Branko Matović  
*“VINČA” Institute of Nuclear Sciences - National Institute of the Republic of Serbia, University of Belgrade, Belgrade, Serbia*  
**Removal of Pb(II) from aqueous solutions by nano- $\text{CeO}_2$**
27. Klaudia Łyszczarz, Piotr Jeleń, Maciej Bik, Jakub Marchewka, Patryk Zając, Maciej Sitarz  
*AGH University of Science and Technology in Cracow, Cracow, Poland*  
**Boron modified ladder-like silsesquioxanes as a precursor for Si(B)-O-C glasses**
28. Alina Makudera, Iryna Marek, Sergij Lakiza  
*Frantsevich Institute for Problems in Materials Science, Kiev, Ukraine*  
**Thermal durability of  $\text{ZrO}_2$ -based ceramic layer for thermal barrier coating**
29. Anasser Imane  
*Cadi Ayyad University, Marrakech, Morocco*  
**Structural, electric and dielectric characterization of  $\text{SrBi}_2\text{Nb}_2\text{O}_9$  doped with rare earth**
30. Anastasia A. Vornovskikh, D.Yu. Kosyanov<sup>1,2</sup>, Xin Liu<sup>3,4</sup>, A.P. Zavjalov<sup>1,5</sup>, A.A. Leonov<sup>2</sup>, Jiang Li<sup>3,4</sup>  
<sup>1</sup>*Far Eastern Federal University, Vladivostok, Russia*  
<sup>2</sup>*Institute of Automation and Control Processes FEB RAS, Russia*  
<sup>3</sup>*Shanghai Institute of Ceramics CAS, China*  
<sup>4</sup>*University of Chinese Academy of Sciences, China*  
<sup>5</sup>*Institute of Solid State Chemistry and Mechanochemistry SB RAS, Russia*  
**Influence of cerium doping on the photoluminescence performance of  $\text{Al}_2\text{O}_3$ -Ce:YAG ceramic phosphors**

31. Wojciech Wieczorek, Maciej Bik, Zofia Kucia, Patryk Zajęc, Maciej Sitarz  
*Faculty of Materials Science and Ceramics, AGH University of Science and Technology in Cracow, Kraków, Poland*  
**The formation of amorphous SiOC glasses doped with Ni<sup>2+</sup>**
32. Zofia Kucia, Maciej Bik, Piotr Jeleń, Patryk Zajęc, Wojciech Wieczorek, Maciej Sitarz  
*Faculty of Materials Science and Ceramics, AGH University of Science and Technology in Cracow, Kraków, Poland*  
**Synthesis and structural analysis of sol-gel derived SiCrOC**
33. Hakan Ünsal, A. Kovalčíková, B. Matović, M. Tatarková, Z. Chlup, M. Hičák, I. Dlouhý, P. Tatarko  
<sup>1</sup>*Institute of Inorganic Chemistry, Slovak Academy of Sciences, Bratislava, Slovakia*  
<sup>2</sup>*Institute of Materials Research, Slovak Academy of Sciences, Košice, Slovak Republic*  
<sup>3</sup>*Centre of Excellence "CEXTREME LAB", Vinča Institute of Nuclear Sciences - National Institute of the Republic of Serbia, University of Belgrade, Belgrade, Serbia*  
<sup>4</sup>*Institute of Physics of Materials, Czech Academy of Sciences, Brno, Czech Republic*  
**In situ synthesis and characterization of ZrB<sub>2</sub>-SiC ceramics with rare-earth based additives**
34. Izabela Rutkowska, Jakub Marchewka, Patryk Bezkosty, Maciej Sitarz  
*AGH University of Science and Technology in Kraków, Kraków, Poland*  
**Preparation of photocurable materials for DLP printing of Al<sub>2</sub>O<sub>3</sub> structures**
35. Tariq Labbilta, Mohamed Ait-El-Mokhtar, Younes Abouliatim, Mehdi Khouloud, Abdelilah Meddich, Mohamed Mesnaoui  
*Cadi Ayyad University, Marrakech Morocco*  
**Elaboration and characterization of new phosphate glassy fertilizers for agricultural application**
36. Dunja Đukić, Aleksandar Krstić, Ksenija Jakoviljević, Jelena Gulcovski, Miljana Mirković  
*University of Belgrade, Faculty of Biology, Belgrade, Serbia*  
*Department of Physical Chemistry, "Vinča" Institute of Nuclear Sciences-National Institute of the Republic of Serbia, University of Belgrade, Belgrade, Serbia*  
*Department of Materials, "Vinča" Institute of Nuclear Sciences-National Institute of the Republic of Serbia, University of Belgrade, Belgrade, Serbia*  
**Mechanical, microstructural and adsorption properties of brushite-metakaolin geopolymer materials**
37. Mariia Smyrnova-Zamkova, Viktor Garashchenko  
<sup>1</sup>*Frantsevich Institute for Problems of Materials Science, NAS of Ukraine*  
<sup>2</sup>*V. Bakul Institute for Superhard Materials, NAS of Ukraine*  
**Physico-mechanical properties of composites 90 wt.% Al<sub>2</sub>O<sub>3</sub> – 10 wt.% ZrO<sub>2</sub> (Y<sub>2</sub>O<sub>3</sub>, CeO<sub>2</sub>)**
38. Soňa Hříbalová, Tereza Uhlířová, Willi Pabst  
*Department of Glass and Ceramics, Faculty of Chemical Technology, University of Chemistry and Technology, Prague, Czech Republic*  
**Effective properties of porous piezoelectric ceramics – from cubic cell models to effective medium approximations and numerics**
39. Patryk Bezkosty, Izabela Rutkowska, Jakub Marchewka, Maciej Sitarz  
*AGH University of Science and Technology, Cracow, Poland*  
**Preparation of photocurable materials for digital light processing 3D printing of silicon oxycarbide ceramics**

40. Izabela Rutkowska, Patryk Bezkosty, Jakub Marchewka, Maciej Sitarz  
*AGH University of Science and Technology, Kraków, Poland*  
**Preparation of photocurable materials for Digital Light Processing 3D printing of Al<sub>2</sub>O<sub>3</sub> structures**
41. Slađana Laketić, Marko Rakin, Miloš Momčilović, Jovan Ciganović, Đorđe Veljović, Ivana Cvijović-Alagić  
*Institute of Nuclear Sciences „Vinča“, University of Belgrade, Belgrade, Serbia,*  
*Faculty of Technology and Metallurgy, University of Belgrade, Belgrade, Serbia*  
**Surface damage caused by laser irradiation of the Ti<sub>45</sub>Nb alloy processed by high-pressure torsion**
42. Iryna Marek, Olena Dudnik, Oleksiy Ruban, Viktor Redko  
*Frantsevich Institute for Problems in Materials Science, Kyiv, Ukraine*  
**Aging of materials of the ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub>-CeO<sub>2</sub> system**
43. Volodymyr Shmybelskyi, Olena Dudnik  
*Frantsevich Institute for Problems in Materials Science, Kyiv, Ukraine*  
**ZrO<sub>2</sub> complex doped with light group of oxides REE for TBC**
44. Nathalie Thor, Jan Bernauer, Emanuel Ionescu, Ralf Riedel, Hans-Joachim Kleebe  
*Institute of Applied Geoscience, Institute of Materials Science, Darmstadt, Germany*  
**Electron microscopic investigations of polymer-derived ceramic Si(HfxTay)N nanocomposites**
45. Lucie Pejchalová, Michaela Vojníková, Jakub Roleček, David Salamon  
*Department of chemistry and biochemistry, Mendel University in Brno; Central European Institute of Technology, Brno University of Technology, Brno, Czech Republic*  
**Freeze-casting of bioceramics: an alternative approach for neural scaffolds**
46. Vojtěch Mařák, Katarína Drdlíková, Daniel Drdlík  
*CEITEC BUT, Brno University of Technology, Brno, Czech Republic*  
**Fabrication and physical, microstructural, and mechanical properties of rare-earth-doped barium titanate ceramics**
47. Patryk Zajac, Maciej Bik, Maciej Sitarz, Piotr Jeleń, Jakub Marchewka, Klaudia Łyszczarz  
*AGH University of Science and Technology in Krakow, Poland*  
**Coatings based on Polymer Derived Ceramics for the application at high temperatures**
48. Boughazif Naima, Marguerite Bienia, Vincent Rat, Martine Lejeune, André Lecomte, Julie Bourret  
*IRCER - Institute for Research on Ceramics, Limoges, France*  
**Formulation of muscovite ceramic inks**
49. Maria M. Uzelac<sup>1</sup>, Sanja J. Armaković<sup>1</sup>, Stevan Armaković<sup>2</sup>, Uroš Gašić<sup>3</sup>, Dragana D. Četojević-Simin<sup>4,5</sup>, Nemanja D. Banić<sup>1</sup>  
<sup>1</sup>*University of Novi Sad Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental Protection, Novi Sad, Serbia*  
<sup>2</sup>*University of Novi Sad Faculty of Sciences, Department of Physics, Novi Sad, Serbia*  
<sup>3</sup>*Department of Plant Physiology, Institute for Biological Research “Siniša Stanković”, National Institute of Republic of Serbia, University of Belgrade, Belgrade, Serbia*  
<sup>4</sup>*Oncology Institute of Vojvodina, Sremska Kamenica, Serbia*  
<sup>5</sup>*Singidunum University, Belgrade, Serbia*  
**Using experimental and computational tools to map degradation mechanisms associated with toxicity of selected β-blockers**

50. [Arkadiusz Dawczak](#), Wojciech Skubida, Sebastian Wachowski, Aleksandra Mielewczyk-Gryń, Maria Gazda  
*Gdańsk University of Technology, Gdańsk, Poland*  
**Structural and electrical properties of high-entropy rare-earth ortho-niobates**
51. [Qirong Chen](#)  
*Belgium Ceramic Research Centre, Mons, Belgium*  
**Hybrid binder jetting process of ceramic materials**
52. [Mahmoud Mohamed Ismail](#), Daa A. Rayan, A.A. Mohamed, M.I. El Gohary  
*Physics Department, Faculty of Science, Al-Azhar University, Cairo, Egypt*  
**Garnet ferrite and hexaferrite for inducing hyperthermia based on targeting cancer treatment**
53. [Anna Włodarkiewicz](#), Camila Ribeiro, Fábio Lin, M. Elisabete Costa, Paula M. Vilarinho  
*Department of Materials and Ceramic Engineering & CICECO – Aveiro Institute of Materials, University of Aveiro, Aveiro, Portugal*  
**Exploring cold sintering as a sustainable processing technique of potassium sodium niobate ceramics**
54. [Harshit Tripathi](#), Sushil Kumar, Jagmohan Datt Sharma, Sumit Bhardwaj  
*Department of Metallurgical and Materials Engineering, Punjab Engineering College (Deemed to be University), Chandigarh, India*  
*Department of Physics, University Institute of Sciences, Chandigarh University, Gharuan, Mohali, Punjab, India*  
**Fabrication of  $Y_2O_3$  ceramic with sintering additives for opto-electrical properties**
55. [Tatiana Lomakina](#), Olga Kurapova  
*St. Petersburg University, Peterhof, St. Petersburg, Russia*  
**Relationship between conditions of synthesis and properties of precursors based on stabilized and non-doped  $ZrO_2$**
56. [Mona Yarahmadi](#), Gemma Fargas Ribas, Joan Josep Roa  
*Universitat Politècnica de Catalunya (UPC), Barcelona, Spain*  
**Production and properties of yttria-stabilized zirconia ceramics by direct ink writing**
57. [Hirad Salari](#), Arsalan Zare, Alireza Babaei, Hamid Abdoli  
*University of Tehran, Niroo Research Institute, Tehran, Iran*  
**Poisoning effects of Sodium on the performance of LSM air electrode**
58. [Ipeknaz Özden](#), Andraž Kocjan, Aljaž Iveković  
*Jožef Stefan Institute, Ljubljana, Slovenia*  
**Effect of particle interaction in ceramic suspensions on the parts prepared by thermoplastic 3D printing**
59. [Paulina Szotłdra](#), Maksymilian Frąc, Waldemar Pichór  
*AGH University of Science and Technology, Kraków, Poland*  
**Effect of sol composition and thermal treatment on  $TiO_2$  phase composition and photocatalytic activity**
60. [András Kovács](#), Éva Makó, István Dódonny, Péter Pekker, Mihály Pósfai, Zoltán Ható  
*University of Pannonia, Veszprém, Hungary*  
**Nanoscale structural and morphological features of kaolinite nanoscrolls**

61. [Daniil Shchekochikhin](#), N.V. Gorshkov  
*Yuri Gagarin State Technical University of Saratov, Saratov, Russia*  
**Effect of synthesis on grain formation and dielectric properties of CCTO Ceramics**
62. [Cristina Vladut](#), Susana Mihaiu, Silviu Preda, José M. Calderón-Moreno, Mihai Anastasescu, Hermine Stroescu, Irina Atkinson, Nicoleta Apostol, Carmen Moldovan, Maria Zaharescu, Mariuca Gartner "Ilie Murgulescu" *Institute of Physical Chemistry of the Romanian Academy, Bucharest, Romania*  
**Optical and piezoelectric properties of Mn doped ZnO thin films obtained by chemical methods**
63. [Dmitrii Komissarenko](#), Thomas Graule, Simon Roland, Benedikt Seeber, Gurdial Blugan  
*Laboratory for High Performance Ceramics, Empa; Metoxit AG, Dübendorf, Switzerland*  
**DLP 3D printing of high strength oxide ceramics**
64. [Petra Šimonová](#), Eva Gregorová, Jana Cibulková, Ivona Sedlářová, Vojtěch Nečina, Willi Pabst  
*University of Chemistry and Technology, Prague, Czech Republic*  
**Sintering without shrinkage – the strange case of pure tin oxide ceramics**
65. [Daniel Jaworski](#), Wojciech Skubida, Aleksandra Mielewczyk-Gryń, Sebastian Wachowski, Tadeusz Miruszewski, Maria Gazda  
*Gdańsk University of Technology, Gdańsk, Poland*  
**High-entropy perovskite oxides as a new family of proton conductors**
66. [Aleksei Sedegov](#), D. Moskovskikh, K. Sidnov, K. Kuskov, I. Serhienko, A. Korotitsky  
*NUST "MISIS", Moscow, Russia*  
**Comparison of the performance characteristics of (TaTiNbZrX)C (X= Mo, W, Hf) high-entropy carbides**
67. [Andrzej Kruk](#)  
*Pedagogical University of Krakow, Kraków, Poland*  
**Wavelength dependence of RE doped magneto-optical ceramics**
68. [Maxim Arsentev](#)  
*Institute of Silicate Chemistry, Russian Academy of Sciences, St. Petersburg, Russia*  
**Comparative study of diamond surface graphitization with orientations (111) and (100) using the method of molecular dynamics**
69. [Milena Dojcinovic](#), Zorka Vasiljevic, Nenad Tadic, Jugoslav Krstic, Smilja Markovic, Matiaz Spreitzer, Janez Kovac, Maria Vesna Nikolic  
*University of Belgrade-Institute for Multidisciplinary Research, Belgrade, Serbia*  
**Synthesis, structure and electrochemical performance of NiMn<sub>2</sub>O<sub>4</sub>**
70. [Eva Kröll](#), Vladimir V. Shvartsman, Doru C. Lupascu  
*University Duisburg-Essen, Essen, Germany*  
**Energy storage performance of barium-zirconate-titanate-based lead-free ceramics**
71. [Milica Stefanović](#), Rada Petrović, Ivana Lukić, Đorđe Janačković  
*University of Belgrade, Innovation Center of Faculty of Technology and Metallurgy, Belgrade, Serbia*  
*University of Belgrade, Faculty of Technology and Metallurgy, Belgrade, Serbia*  
**Deposition of methylammonium lead bromide perovskite on titania nanotube arrays assisted by supercritical carbon dioxide**

72. Jelena Vujančević  
*Institute of Technical Sciences of SASA, Belgrade, Serbia*  
**Photoactivity of vanadium oxide-TiO<sub>2</sub> nanotubes**
73. Jagoda Budnik, Tadeusz Miruszewski, Aleksandra Mielewczyk-Gryń, Maria Gazda  
*Gdańsk University of Technology, Gdańsk, Poland*  
**Structural properties and water uptake of BaCe<sub>0.6</sub>Zr<sub>0.2</sub>Y<sub>0.2-x</sub>Fe<sub>x</sub>O<sub>3-δ</sub> triple-conducting oxides**
74. Mohammad Bandpey, Mohammad Bandpey, Alireza Babaei, Cyrus Zamani  
*University of Tehran, Tehran, Iran*  
**Effects of coating parameters on the electrochemical performance of Li<sub>3</sub>PO<sub>4</sub> modified LiNi<sub>0.5</sub>Co<sub>0.2</sub>Mn<sub>0.3</sub>O<sub>2</sub> cathode material**
75. Karolina Dudek, Jacek Podwórny, Jerzy Czechowski  
*Łukasiewicz Research Network, Institute of Ceramics and Building Materials, Refractory Materials Division in Gliwice, Gliwice, Poland*  
**In-situ high temperature structural and mechanical investigations of the SiAlON's sinter**
76. Zorka Vasiljevic, Milena P. Dojčinović, Jelena Vujančević, Matjaz Spreitzer, Janez Kovač, Ivona J.-Čaštván, Dragana Bartolić, Smilja Marković, Nenad B. Tadić, Maria Vesna Nikolić  
*University of Belgrade - Institute for Multidisciplinary Research, Belgrade, Serbia*  
**Influence of calcination temperature on the structure, morphology and optical properties of electrospun pseudobrookite nanofibers**
77. Jakub Marchewka, Patryk Bezkosty, Izabela Rutkowska, Maciej Sitarz  
*Faculty of Materials Science and Ceramics, AGH University of Science and Technology, Kraków, Poland*  
**3D printed polymer-derived silicon oxycarbide ceramics**
78. Marta Lubszczyk, Tomasz Brylewski, Andrzej Kruk  
*AGH University of Science and Technology, Faculty of Materials Science and Ceramics, Kraków, Poland*  
**Optimization of wet chemistry methods for fabrication of pure and RE doped KNN toward piezoelectric applications**
79. Arsalan Zare, Hiran Salari, Alireza Babaei, Hamid Abdoli  
*University of Tehran (UT), Niroo Research Institute (NRI), Tehran, Iran*  
**Synthesis of Sr<sub>2</sub>Fe<sub>1.5-x</sub>Mo<sub>0.5+x</sub>O<sub>6-δ</sub> (0≤x≤0.5) as an electrode material for solid oxide cells**
80. Přemysl Šťastný, Martin Trunec, Zdenek Chlup, Jan Hliničan, Smiešková Jana  
*Central European Institute of Technology, Šardice, Czech Republic*  
**Gel-tape casting of high strength ceramic foils and their application**
81. Camila Ribeiro, M. Elisabete Costa, Paula Vilarinho  
*CICECO – Aveiro Institute of Materials - University of Aveiro, Aveiro, Portugal*  
**Fabrication of Ba<sub>0.6</sub>Sr<sub>0.4</sub>TiO<sub>3</sub> ceramics by cold sintering process**
82. Olga Kurapova, A.A. Zaripov<sup>1</sup>, V.V. Pazheltsev<sup>1</sup>, O.V. Glumov<sup>1</sup>, P.M. Faia<sup>2</sup>  
<sup>1</sup>*Saint Petersburg State University, Saint Petersburg, Russia*  
<sup>2</sup>*University of Coimbra, Coimbra, Portugal*  
**Protonic conductivity of polyantimonic acid based electrolytes**



83. [Artem Zaripov](#), Olga Yu. Kurapova, Vasiliy V. Pazheltsev  
*Saint Petersburg State University, St. Petersburg, Russia*  
**Proton conductivity of polyantimonic acid based membranes**
84. [Piotr Czaja](#), Elżbieta Szostak, Małgorzata Karolus, Dariusz Bochenek, Anna Kozieł, Kamila Kluczevska-Chmielarz, Grzegorz Jagło, Jacek Michniowski  
*Institute of Technology, Pedagogical University of Krakow, Poland*  
**Effect of dopant ions on selected properties of lead free  $K_{0.5}Bi_{0.5}TiO_3$  ceramics**
85. [Gilyana Kazakova](#), Safronova Tatyana  
*Lomonosov Moscow State University, Moscow, Russia*  
**Synthesis of newberite powders for production of resorbable bioceramics by stereolithography 3D printing**
86. [Mateusz Bara](#), Małgorzata Karolus, Lucjan Kozielski, Małgorzata Adamczyk-Habrajska  
*Faculty of Science and Technology, Institute of Materials Engineering, University of Silesia in Katowice, Chorzów, Poland*  
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87. [Bartłomiej Starzyk](#), Magdalena Leśniak, Marcin Kochanowicz, Jacek Żmojda, Agata Baranowska, Marta Kuwik, Piotr Jeleń, Piotr Miluski, Jan Dorosz, Wojciech A. Pisarski, Joanna Pisarska, Dominik Dorosz  
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<sup>2</sup>*Basic Science Department, Faculty of Physical Therapy, Deraya University, New Minya City, Minya, Egypt*  
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