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XVI  
**ECerS**  
CONFERENCE

TORINO  
16-20 JUNE  
2019



**XVI CONFERENCE AND EXHIBITION OF THE EUROPEAN CERAMIC SOCIETY**



**WEDNESDAY 19 JUNE**  
**DAILY PROGRAMME**

| Room           | Aula Magna<br>Main Pav.       | 3<br>Corte<br>Interrata | 7<br>Corte<br>Interrata | 10<br>Corte<br>Interrata | 1<br>Corte<br>Interrata | 2<br>Corte<br>Interrata | T1<br>Pav. T | 9<br>Corte<br>Interrata | 5<br>Corte<br>Interrata | 8<br>Corte<br>Interrata |
|----------------|-------------------------------|-------------------------|-------------------------|--------------------------|-------------------------|-------------------------|--------------|-------------------------|-------------------------|-------------------------|
| 08.30<br>12.00 | ECerS<br>Awardees<br>Ceremony |                         |                         |                          |                         |                         |              |                         |                         |                         |
| 12.15<br>13.30 |                               | Lunch                   |                         |                          |                         |                         |              |                         |                         |                         |
| 13.30<br>15.30 |                               | S1                      | S1                      | S2                       | S4                      | S4                      | S5           | S6                      | S7                      | S8                      |
| 15.30<br>16.00 |                               | Coffee break            |                         |                          |                         |                         |              |                         |                         |                         |
| 16.00<br>18.00 |                               | S1                      | S1                      | S2                       | S4                      | S4                      | S5           | S6                      | S7                      | S8                      |
|                |                               | GALA DINNER             |                         |                          |                         |                         |              |                         |                         |                         |

LEGENDA

- S1** Innovative processing and synthesis
- S2** HT Processes and Advanced Sintering
- S3** Modelling of ceramics together with IV Cermodel: "Modelling and simulation meet innovation in ceramics technology"
- S4** Advanced structural ceramics, composites and refractories
- S5** Ceramics and glasses for healthcare
- S6** Ceramics for energy conversion and storage
- S7** Functional Ceramics
- S8** Silicate Ceramics
- S9** Ceramics in Cultural Heritage and Art
- A&D** Art & Design in Ceramics

| Time        | Name  | Title  |
|-------------|---|--|
| 08:30 09:05 | Mathias Herrmann                            | <b>JECs TRUST AWARD</b><br>WEAR RESISTANT MATERIALS – PRESENT AND FUTURE                                 |
| 09:05 09:20 | Richard Todd                                | JECs 30 <sup>TH</sup> ANNIVERSARY  |
| 09:20 09:25 | Pedro Ivo Batistel Galiole Brossi Pelissari | <b>JECs TRUST BEST PAPER</b><br>NACRE-LIKE CERAMIC REFRACTORIES FOR HIGH TEMPERATURE APPLICATIONS        |
| 09:25 09:55 | Young-Wook Kim                              | <b>BROOK AWARD</b><br>USING MICROSTRUCTURE AND COMPOSITION TO ACHIEVE HIGH PERFORMANCE SIC CERAMICS      |
| 09:55 10:25 | Richard Todd                                | <b>STUIJTS AWARD</b><br>FLASH SINTERING - WHERE'S THE MAGIC?   |
| 10:25 10:55 | Jose Maria Domínguez Ibáñez                 | <b>G.N. BABINI - INDUSTRIAL AWARD</b><br>INNOVATIVE REFRACTORIES FOR A SUSTAINABLE AND INDUSTRIAL EUROPE |
| 10:55 11:25 | Andraž Kocjan                               | <b>YOUNG SCIENTIST AWARD</b><br>FROM PECULIAR TO INNOVATIVE AND SUSTAINABLE CERAMIC PROCESSING           |
| 11:25 11:45 | STUDENT SPEECH CONTEST WINNER               |  |
| 11:45 11:55 | PRESENTATION OF THE NEW ECERS PRESIDENT     |  |

Programme updated to **Wednesday, 22 May, 2019.**  
The current, finally updated programme will be available in the conference **APP ECerS 2019.**

| S 01 - HYBRIDIZATION TECHNOLOGIES 1 - 13:30-15:30 |  |  |        |
|---|--|--|--------|
| Chair: Enrico Bernardo                            |  |  |        |
| Time  | Name                                     | Title  | ID Abs |
| 13:30 14:00                                       | Louis Winnubst<br><i>Invited Lecture</i> | TUNING MICROPOROUS CERAMIC MEMBRANES FOR SOLVENT NANOFILTRATION                                      | 50     |
| 14:00 14:15                                       | Christophe Chaput                        | NEW APPLICATIONS OF HYBRID MULTI-MATERIALS AND SMART DESIGN  | 783    |
| 14:15 14:30                                       | Giulio Boveri                            | SYNTHESIS AND CHARACTERIZATION OF AMPHIPHOBIC HYBRID COATINGS FOR INDUSTRIAL APPLICATIONS            | 781    |
| 14:30 14:45                                       | Rachel Camerini                          | HYBRID NANO-COMPOSITES FOR THE CONSOLIDATION OF EARTHEN MASONRY                                      | 762    |
| 14:45 15:00                                       | Maria Eugenia Contreras Garcia           | SYNTHESIS AND CHARACTERIZATION OF HYBRID NANOCOMPOSITE MEMBRANES FOR CO <sub>2</sub> CAPTION         | 718    |
| 15:00 15:15                                       | Zoilo Gonzalez                           | FABRICATION OF TAILORED STRUCTURES OF SEMICONDUCTORS TiO <sub>2</sub> -BASED BY COLLOIDAL PROCESSING | 603    |
| 15:15 15:30                                       | Innocent Nomel                           | ELABORATION OF LEAD-FREE PIEZOELECTRIC MATERIALS FOR THICK FILMS COATING BY AEROSOL DEPOSITION       | 328    |

| S 01 - HYBRIDIZATION TECHNOLOGIES 2 - 16:00-18:00 |                            |  |        |
|---|----------------------------|--|--------|
| Chair: Louis Winnubst                             |                            |  |        |
| Time  | Name                       | Title  | ID Abs |
| 16:00 16:15                                       | Efrat Shukrun Farrell      | 3D PRINTED ORGANIC-CERAMIC COMPLEX HYBRID STRUCTURES WITH HIGH SILICA CONTENT  | 183    |
| 16:15 16:30                                       | Bala Vaidhyanathan         | FIELD ASSISTED PROCESSING OF ADDITIVE MANUFACTURED ADVANCED CERAMICS   | 94     |
| 16:30 16:45                                       | P. Nicolas                 | HYBRID MACHINING FOR RAPID PROTOTYPING OF CERAMICS   | 659    |
| 16:45 17:00                                       | Malgorzata Anna Piechowiak | POTENTIAL OF AEROSOL JET PRINTING FOR MICROFABRICATION OF ELECTRONIC COMPONENTS COMPRISING CERAMICS                                    | 282    |
| 17:00 17:15                                       | Lubos Baca                 | MICROSTRUCTURE AND MECHANICAL PROPERTIES OF TiC <sub>4</sub> -B <sub>4</sub> C COMPOSITES PREPARED BY ADDITIVE MANUFACTURING.          | 829    |
| 17:15 17:30                                       | Victor Badea               | DEVELOPMENT OF A CERAMIC-CERAMIC WELD BY PLASMA SPRAY  | 828    |
| 17:30 17:45                                       | Begoña Ferrari             | TAILORING OF THE STABILIZER ADSORPTION ON NANOPARTICLES SURFACES FOR THE NANOSTRUCTURED GROWTH OF CERAMIC COATINGS IN 3D AM STRUCTURES | 649    |
| 17:45 18:00                                       | Tadachika Nakayama         | NANO SIZED 3D PRINTING AND MOTION CONTROL BY NANO SECOND PULSED FIELD  | 348    |

| S 01 - ADVANCED PROCESSING OF ZIRCONIA CERAMICS - 13:30-15:30 |  |  |        |
|---|--|--|--------|
| Chair: María Teresa Colomer                                   |  |  |        |
| Time  | Name   | Title  | ID Abs |
| 13:30 14:00   | Omer Van Der Biest<br><i>Invited Lecture</i> | TEXTURING OF YTTRIA AND CERIA STABILIZED TETRAGONAL ZIRCONIA POLYCRYSTALS IN A 17 TESLA MAGNETIC FIELD   | 89     |
| 14:00 14:15   | Jennifer Karbaum                             | INNOVATIVE FORMING PROCESS FOR 3Y-TZP MICROSPHERES BY THE USE OF INKJET-TECHNOLOGY   | 1      |
| 14:15 14:30   | H. Catir                                     | EFFECT OF CALCINATION TEMPERATURE ON THE PRODUCTION OF METASTABLE ZrO <sub>2</sub> NANOPARTICLES PRODUCES FROM SYNTHESIS OF NANOCRYSTALLINE ZIRCONIA USING SOL GEL METHOD. | 576    |
| 14:30 14:45   | Marharyta Lakusta                            | THE SILICA ADDITIVE INFLUENCE ON THE DENSIFICATION BEHAVIOR AND MASS TRANSFER MECHANISMS IN 3Y-TZP NANOPOWDERS.  | 455    |
| 14:45 15:15   | Thomas J Webster<br><i>Invited Lecture</i>   | CERAMICS AT THE NANOSCALE: IMPROVED BIOMATERIALS, DRUG DELIVERY VEHICLES, AND NOW IN SITU IMPLANTABLE SENSORS  | 55     |

| S 01 - ADVANCED PROCESSING OF RE AND RE-DOPED CERAMICS - 16:00-18:00 |  |  |        |
|--|--|--|--------|
| Chair: Omer Van Der Biest  |  |  |        |
| Time   | Name   | Title  | ID Abs |
| 16:00 16:30  | María Teresa Colomer<br><i>Invited Lecture</i> | DESIGN OF NANOSTRUCTURED RE-DOPED CERAMICS WITH IMPROVED OPTICAL PROPERTIES PREPARED BY DIFFERENT SYNTHESIS ROUTES | 722    |
| 16:30 16:45  | Branko Matovic                                 | SYNTHESIS, CHARACTERIZATION AND DENSIFICATION OF Ag DOPED CERIA NANOPOWDERS  | 390    |
| 16:45 17:00  | Renata Ayres Rocha                             | EFFECT OF PRECURSOR ON THE CHARACTERISTICS OF CERIA-BASED CERAMIC PARTICLES PREPARED BY SOLUTION SYNTHESIS         | 242    |
| 17:00 17:15  | Katarina Muzina                                | HYDROTHERMALLY DERIVED DOPED CERIA NANOCATALYST  | 350    |
| 17:15 17:30  | Abigail Torres Romero                          | MODIFICATION OF THE BAND GAP AND THE PHOTOCATALYTIC POTENTIAL OF TITANIA NANOPARTICLES BY DOPING WITH CERIA        | 115    |
| 17:30 17:45  | Alexander Khort                                | SOLUTION COMBUSTION SYNTHESIS AS A POWERFUL TOOL FOR PREPARATION OF NANOMATERIALS OF DIFFERENT FUNCTIONAL CLASSES  | 504    |

| S 02 - UNCONVENTIONAL SINTERING 5 - 13:30-15:30 |   |  |        |
|---|---|--|--------|
| Chair: Jonathan Phillips                        |   |  |        |
| Time  | Name                                      | Title  | ID Abs |
| 13:30 14:00                                     | Sylvain Marinel<br><i>Invited Lecture</i> | FREE AND PRESSURE-ASSISTED MICROWAVE SINTERING: TOWARDS TRANSPARENT $MgAl_2O_4$ CERAMICS   | 400    |
| 14:00 14:15                                     | François Valdivieso                       | SINTERING BY MICROWAVE HEATING OF LARGE ALUMINA PARTS  | 92     |
| 14:15 14:30                                     | Clémence Petit                            | MICROWAVE SINTERING OF NUCLEAR CERAMICS  | 288    |
| 14:30 14:45                                     | Muhammad Waqas Khalid                     | EFFECT OF CRYSTAL SYSTEM OF $ZrO_2$ ON MECHANICAL PROPERTIES, THERMAL PROPERTIES, AND SINTERING KINETICS OF $Al_2O_3-ZrO_2$ COMPOSITES SYNTHESIZED BY MICROWAVE HYBRID SINTERING | 506    |
| 14:45 15:00                                     | Anthony Thuault                           | RAPID MANUFACTURING OF CERAMICS BY COMBINING STEREO LITHOGRAPHY AND MICROWAVE SINTERING  | 120    |
| 15:00 15:15                                     | Tristan Garnault                          | MICROWAVE SINTERING OF 3D PRINTED CONE-SHAPE CERAMICS: EXPERIMENT AND SIMULATION SYNERGY   | 623    |
| 15:15 15:30                                     | Ji Zou                                    | MICROSTRUCTURAL STUDY OF SiC/SiC COMPOSITES DENSIFIED BY CONVENTIONAL AND MICROWAVE ASSISTED CHEMICAL VAPOUR INFILTRATION  | 5      |

| S 02 - UNCONVENTIONAL SINTERING 6 - 16:00-18:00 |   |   |        |
|---|---|---|--------|
| Chair: Zhijian Shen                             |   |   |        |
| Time  | Name                                      | Title   | ID Abs |
| 16:00 16:30                                     | Clive Randall<br><i>Invited Lecture</i>   | COLD SINTERING OF ELECTRO CERAMIC MATERIALS, DEVICES AND NOVEL NANOCOMPOSITES                               | 943    |
| 16:30 16:45                                     | Graziella Goglio                          | UNCONVENTIONAL LOW TEMPERATURE SINTERING PROCESS OF CERAMICS AND MULTIMATERIALS: THE HYDROTHERMAL SINTERING | 610    |
| 16:45 17:15                                     | Monica Ferraris<br><i>Invited Lecture</i> | JOINING AND INTEGRATION OF CERAMICS   | 942    |

| S 04 - MICROSTRUCTURAL DESIGN AND PROCESSING OF UHTC - 13:30-15:30 |   |   |        |
|--|---|---|--------|
| Chair: William Fahrenholtz   |   |   |        |
| Time   | Name                                      | Title   | ID Abs |
| 13:30 14:00  | Carolina Tallon<br><i>Invited Lecture</i> | MULTI-SCALE THERMAL PROTECTIVE SYSTEMS FOR EXTREME ENVIRONMENTS: DESIGN, PROCESSING, PROPERTIES AND MODELING        | 137    |
| 14:00 14:15  | Natalya Baklanova                         | REACTION OF REFRACTORY CARBIDES WITH IRIIDIUM AS A NEW SOURCE FOR FORMATION OF THE ULTRA-HIGH TEMPERATURE MATERIALS | 825    |
| 14:15 14:30  | Anna Dorner                               | SYNTHESIS AND PROPERTIES OF $(Zr,Ta)B_2$ CERAMICS   | 675    |
| 14:30 14:45  | Hanzhu Zhang                              | HIGH ENTROPY $B_2(HfMoTaTi)C$ AND SiC CERAMIC COMPOSITE   | 14     |
| 14:45 15:00  | Frederic Monteverde                       | CORE-SHELL SOLID SOLUTION STRUCTURES TO ENHANCE HIGH TEMPERATURE PROPERTIES IN DUAL $ZrB_2-MoSi_2$ COMPOSITES       | 559    |
| 15:00 15:15  | Kerstin Stricker                          | MICROSTRUCTURAL INVESTIGATION OF FUNCTIONALLY GRADED $ZrB_2$ -BASED ULTRA-HIGH TEMPERATURE CERAMICS                 | 155    |

| S 04 - PROPERTIES OF UHTC - 16:00-18:00 |   |  |        |
|---|---|--|--------|
| Chair: Carolina Tallon                  |   |  |        |
| Time                                    | Name  | Title  | ID Abs |
| 16:00 16:30                             | William Fahrenholtz<br><i>Invited Lecture</i> | EFFECT OF TRANSITION METAL ADDITIVES ON THE STRUCTURE AND PROPERTIES OF ZIRCONIUM DIBORIDE CERAMICS                            | 657    |
| 16:30 16:45                             | Fu-Zhi Dai                                    | THEORETICAL INVESTIGATIONS ON THE EFFECTS OF SOLUTE ATOMS ON HIGH TEMPERATURE MECHANICAL PROPERTIES OF $ZrB_2$                 | 707    |
| 16:45 17:00                             | Mikhail Sheindlin                             | EXPERIMENTAL STUDY OF THERMOPHYSICAL PROPERTIES AND HIGH-TEMPERATURE BEHAVIOUR OF THE UHTC CARBIDES AND DIBORIDES UP TO 4500 K | 186    |
| 17:00 17:15                             | Na Ni   | TAILORING MICROSTRUCTURE AND INTERFACES FOR IMPROVED TOUGHNESS AND ABLATION RESISTANCE IN HfC CERAMICS                         | 336    |
| 17:15 17:30                             | Mufit Akinc                                   | PROCESSING AND OXIDATIVE STABILITY ZIRCONIUM DIBORIDE BASED ULTRA HIGH TEMPERATURE CERAMICS                                    | 853    |

| S 04 - ZIRCONIA-BASED MATERIALS 1 - 13:30-15:30 |  |  |        |
|---|--|--|--------|
| Chair: Torsten Rabe                             |  |  |        |
| Time  | Name                                   | Title  | ID Abs |
| 13:30 14:00                                     | Raul Bermejo<br><i>Invited Lecture</i> | TAILORING MICROSTRUCTURE AND ARCHITECTURE TO DESIGN DAMAGE TOLERANT CERAMICS   | 813    |
| 14:00 14:15                                     | Andrea Gommeringer                     | PROPERTIES OF TZPs MADE FROM RARE EARTH OXIDE CO-STABILIZED POWDERS MADE BY COATING AND MECHANICAL ALLOYING PROCESS            | 605    |
| 14:15 14:30                                     | Javier Macias                          | 2YSZ POWDER CERAMIC PREPARED BY EMULSION DETONATION SYNTHESIS AS PROMISING MATERIALS TO REPLACE 3YSZ IN DEMANDING APPLICATIONS | 412    |
| 14:30 14:45                                     | Zbigniew Pedzich                       | INFLUENCE OF SINTERING METHOD ON PHASE COMPOSITION AND MECHANICAL PROPERTIES OF ZIRCONIA/ALUMINA/TUNGSTEN CARBIDE COMPOSITES   | 297    |
| 14:45 15:00                                     | Igor Danilenko                         | EFFECT OF SMALL AMOUNT OF ALUMINA ON SINTERING BEHAVIOR, STRUCTURE AND MECHANICAL PROPERTIES OF ZIRCONIA CERAMICS              | 705    |
| 15:00 15:15                                     | Piotr Klimczyk                         | ZIRCONIA - BASED CERAMICS REINFORCED WITH SUPERHARD CUBIC BORON NITRIDE PARTICLES OBTAINED BY SPARK PLASMA SINTERING           | 491    |
| 15:15 15:30                                     | Imane Touaiher                         | FRACTURE BEHAVIOR OF HIGHLY TRANSFORMABLE Ce-TZP / Al <sub>2</sub> O <sub>3</sub> / HEXA-ALUMINATE COMPOSITES                  | 114    |

| S 04 - ZIRCONIA-BASED MATERIALS 2 - 16:00-18:00 |   |  |        |
|---|---|--|--------|
| Chair: Raul Bermejo                             |   |  |        |
| Time  | Name                                    | Title  | ID Abs |
| 16:00 16:15                                     | Alethea Liens                           | STUDY OF TRANSFORMATION BANDS IN CERIA-STABILIZED ZIRCONIA-BASED COMPOSITES: DOES THE TRANSFORMATION-INDUCED PLASTICITY INDUCE DAMAGE? | 436    |
| 16:15 16:30                                     | Malika Saadaoui                         | X-RAY TOMOGRAPHY CHARACTERIZATION OF PROCESSING DEFECTS IN ADDITIVELY MANUFACTURED ZIRCONIA: RELATION TO STRENGTH                      | 229    |
| 16:30 16:45                                     | Torsten Rabe                            | DEVELOPMENT OF CERAMIC SPRINGS FOR SENSOR APPLICATION  | 263    |
| 16:45 17:00                                     | Jamesa Stokes                           | EFFECTS OF CRYSTAL STRUCTURE AND CATION SIZE ON MOLTEN SILICATE REACTIVITY WITH ENVIRONMENTAL BARRIER COATING MATERIALS                | 158    |
| 17:00 17:15                                     | Marisa Céilia Da Silva Resende Da Costa | A STUDY ABOUT NANOCOMPOSITE CERAMIC MATERIALS PROCESSED BY INJECTION MOULDING FOR A TEXTILE INDUSTRY APPLICATION                       | 708    |

| S 05 - CERAMICS AND COMPOSITES FOR DENTAL APPLICATIONS 1 - 13:30-15:30 |  |   |        |
|--|--|---|--------|
| Chair: Fei Zhang, Joana Mezquita-Guimaraes                             |  |   |        |
| Time   | Name                                       | Title   | ID Abs |
| 13:30 14:00  | Jérôme Chevalier<br><i>Invited Lecture</i> | FORTY YEARS AFTER 'CERAMIC-STEEL' ? THE ANSWER OF CURRENT ZIRCONIA CERAMICS TO THE REQUESTS OF THE DENTAL COMMUNITY   | 737    |
| 14:00 14:30  | Corrado Piconi<br><i>Invited Lecture</i>   | CERAMIC DENTAL IMPLANTS: HISTORY, STATUS, DEVELOPMENT IN PROGRESS   | 283    |
| 14:30 15:00  | Jens Tartsch<br><i>Invited Lecture</i>     | BACKGROUNDS AND CLINICAL APPLICATION OF DENTAL CERAMIC IMPLANTS   | 128    |
| 15:00 15:15  | Helen Reveron                              | STABLE, TOUGH AND DUCTILE CERIA-STABILIZED ZIRCONIA BASED COMPOSITES AS AN ALTERNATIVE TO TITANIUM AND YTTRIA-STABILIZED ZIRCONIA CERAMICS FOR DENTAL IMPLANT FABRICATION | 249    |
| 15:15 15:30  | Omid Akhlaghi                              | HIGH STRENGTH AND TRANSLUCENT NANOCRYSTALLINE YTTRIA-STABILIZED ZIRCONIA FOR DENTAL APPLICATIONS: PROCESSING AND CHARACTERIZATION   | 854    |

| S 05 - CERAMICS AND COMPOSITES FOR DENTAL APPLICATIONS 2 - 16:00-18:00 |                          |   |        |
|--|--------------------------|---|--------|
| Chair: Jerome Chevalier, Helen Reveron                                 |                          |   |        |
| Time   | Name                     | Title   | ID Abs |
| 16:00 16:15  | H. Z. Li                 | TURNING ZIRCONIA FROM STRUCTURAL TO AESTHETIC BIO- AND STRUCTURAL CERAMICS FOR RESTORATIVE DENTISTRY  | 415    |
| 16:15 16:30  | Frederic Monteverde      | ALUMINA-ZIRCONIA COMPOSITES FOR DENTAL APPLICATIONS BY MICROSTRUCTURE DESIGN  | 366    |
| 16:30 16:45  | Fei Zhang                | RELIABILITY OF DIFFERENT ZIRCONIA CERAMICS FOR DENTAL RESTORATIONS AND IMPLANTS   | 16     |
| 16:45 17:00  | Wei Xia                  | SILICON NITRIDE DENTAL IMPLANT WITH ENHANCED BIOACTIVITY  | 43     |
| 17:00 17:15  | Abilio Pereira Silva     | EFFECT OF STOICHIOMETRIC CALCIUM ZIRCONATE DOPANT ON THE DECOMPOSITION OF HYDROXYAPATITE  | 179    |
| 17:15 17:30  | Andreja Gajovic          | STABILISED ZIRCONIA/CALCIUM PHOSPHATE COMPOSITES FOR BONE IMPLANTS  | 628    |
| 17:30 17:45  | Joana Mesquita-Guimaraes | CELL BIOLOGY EVALUATION OF LASER SINTERED HAP AND 45S5 BIOACTIVE GLASS COATINGS ON TEXTURED SURFACES USING MC3T3-E1 CELLS (PRIMARY OSTEOBLASTS) | 379    |
| 17:45 18:00  | Jaroslav Sedlacek        | BIOACTIVITY ENHANCEMENT OF SILICON NITRIDE CERAMICS BY SURFACE OXIDATION  | 195    |

| S 06 - ELECTROCHEMICAL STORAGE 1 - 13:30-15:30 |   |  |        |
|--|---|--|--------|
| Chair: Mihails Kusnezoff                       |   |  |        |
| Time   | Name                                    | Title  | ID Abs |
| 13:30 14:00                                    | Guosheng Li<br><i>Invited Lecture</i>   | ADVANCED INTERMEDIATE TEMPERATURE Na-METAL HALIDE BATTERIES FOR STATIONARY ENERGY STORAGE SYSTEM APPLICATIONS                                | 965    |
| 14:00 14:15                                    | Franciele Wolfart                       | NEW CATHODE MATERIAL OF NIOBIUM-DOPE LiCoPO <sub>4</sub> FOR LI-BASED BATTERIES  | 46     |
| 14:15 14:30                                    | Belén Levenfeld                         | SELF-SUPPORTED AND BINDER-FREE LFP/C THICK ELECTRODES PRODUCED BY POWDER EXTRUSION MOLDING AS CATHODES FOR LI-ION BATTERIES.                 | 441    |
| 14:30 14:45                                    | Knoblauch Volker                        | INCREASING THE RATE CAPABILITY OF HIGH ENERGY ELECTRODES FOR LITHIUM-ION BATTERIES BY LASER MACHINING  | 488    |
| 14:45 15:00                                    | Pradeep Vallachira<br>Warriam Sasikumar | POLYMER DERIVED SIOC CERAMICS AS A STRESS ACCOMMODATING NETWORK FOR IMPROVING THE ELECTROCHEMICAL STABILITY OF Sn ANODES IN LI-ION BATTERIES | 90     |
| 15:00 15:15                                    | Kai Huang                               | POLYMER-DERIVED SIOC CERAMICS FOR ENERGY STORAGE APPLICATIONS  | 544    |
| 15:15 15:30                                    | Neeraj Kumar                            | SI-Sn FILMS DEPOSITED AT DIFFERENT VACUUM PRESSURE USING RF MAGNETRON SPUTTERING AS POSSIBLE CANDIDATES FOR APPLICATION IN LI-ION BATTERIES  | 467    |

| S 06 - ELECTROCHEMICAL STORAGE 2 - 16:00-18:00 |                    |  |        |
|--|--------------------|--|--------|
| Chair: Guosheng Li                             |                    |  |        |
| Time   | Name               | Title  | ID Abs |
| 16:00 16:15                                    | Mehdi Soleimanzade | CHARGE STORAGE MECHANISM OF Na <sub>0.44</sub> MnO <sub>2</sub> USING AS AN ACTIVE MATERIAL FOR AQUEOUS RECHARGEABLE SODIUM-ION STORAGE SYSTEMS    | 167    |
| 16:15 16:30                                    | Stefano Marchionna | MXenes FOR NIB ANODES: ELECTROCHEMICAL BEHAVIOR AS A FUNCTION OF PROCESS PARAMETERS  | 402    |
| 16:30 16:45                                    | Sven Uhlenbruck    | TOWARDS HIGH-ENERGY SOLID-STATE LITHIUM BATTERIES WITH GARNET-TYPE ELECTROLYTES  | 101    |
| 16:45 17:00                                    | Laure Guironnet    | HYBRID ELECTROLYTES FOR ALL SOLID-STATE LITHIUM BATTERIES: DEVELOPMENT OF Li <sub>7</sub> La <sub>3</sub> Zr <sub>2</sub> O <sub>12</sub> MATERIAL | 580    |
| 17:00 17:15                                    | Katja Wätzig       | CO-SINTERED CERAMIC CATHODES FOR ALL-SOLID-STATE BATTERIES   | 44     |
| 17:15 17:30                                    | Doerte Wagner      | SODIUM CONDUCTING SOLID ELECTROLYTE MEMBRANES BASED ON A GLASS CERAMIC MATERIAL  | 64     |
| 17:30 17:45                                    | Ana Santic         | ELECTRICAL TRANSPORT IN SODIUM PHOSPHATE GLASSES CONTAINING TUNGSTEN AND MOLYBDENUM OXIDES   | 208    |

## S 07 - FERROELECTRICS &amp; PIEZOELECTRICS 1 - 13:30-15:30

Chair: Manuel Hinterstein

| Time        | Name                                 | Title  | ID Abs |
|-------------|--------------------------------------|--|--------|
| 13:30 14:00 | Akira Ando<br><i>Invited Lecture</i> | STRUCTURAL DESIGNS FOR FERROELECTRIC CERAMICS AND APPLICATIONS IN FUTURE ELECTRONICS   | 842    |
| 14:00 14:15 | Catherine Elissalde                  | EXPLORING SPARK PLASMA SINTERING AT LOW TEMPERATURE TO (CO)-SINTER FUNCTIONAL OXIDES USED IN ELECTROCERAMICS   | 913    |
| 14:15 14:30 | Florian Dupla                        | DEVELOPMENT OF HIGH TEMPERATURE SURFACE ACOUSTIC WAVE SENSORS BASED ON A PIEZOELECTRIC GLASS-CERAMIC   | 670    |
| 14:30 14:45 | Simone Santucci                      | DEFECTIVE CERIA ACTUATOR: THE INFLUENCE OF ELECTRODES.   | 206    |
| 14:45 15:00 | Marie-Sophie Renoirt                 | INFLUENCE OF CRYSTALLIZATION PROCESS PARAMETERS ON CRYSTALS GROWTH MECHANISMS, MICROSTRUCTURE AND PIEZOELECTRIC PROPERTIES OF GLASS-CERAMICS CONTAINING FRESNOITE CRYSTALS | 251    |
| 15:00 15:15 | Tutu Sebastian                       | ENHANCING DIELECTRIC PROPERTIES OF BARIUM TITANATE MACROFIBERS   | 873    |
| 15:15 15:30 | Tomoki Murata                        | ANTI-POLAR ORDER IN TETRAGONAL TUNGSTEN BRONZE $K_2Rn_bO_{15}$ (R: RARE EARTH)   | 351    |

## S 07 - FERROELECTRICS &amp; PIEZOELECTRICS 2 - 16:00-18:00

Chair: Akira Ando

| Time        | Name   | Title   | ID Abs |
|-------------|--|---|--------|
| 16:00 16:30 | Manuel Hinterstein<br><i>Invited Lecture</i> | FUNCTIONAL ELECTROCERAMICS: THE COMPLEX STRUCTURE BEHIND SIMPLE CURVES  | 558    |
| 16:30 16:45 | Nicolas Vaxelaire                            | INTERPHASE AND DOMAIN WALL MOTION IN FERROELECTRIC FILMS AS PROBED BY IN-SITU X-RAY DIFFRACTION DURING ELECTRICAL BIASING             | 864    |
| 16:45 17:00 | Flora Mae Ruiz                               | EFFECT OF PHASE TRANSITION AND ORBITAL HYBRIDIZATION ON DIELECTRIC AND FERROELECTRIC PROPERTIES OF BARIUM ZIRCONATE TITANATE CERAMICS | 233    |
| 17:00 17:15 | Beecher Watson                               | TEXTURED PIEZOELECTRIC CuO-DOPED PIN-PMN-PT CERAMICS  | 862    |
| 17:15 17:30 | Edoardo Mantheakis                           | TEMPLATED GRAIN GROWTH OF [001]-ORIENTED LEAD ZIRCONATE TITANATE  | 405    |
| 17:30 17:45 | Kelly Orlik                                  | MICROWAVE SINTERING: IMPROVEMENT OF THE ELECTRICAL PROPERTIES OF BARIUM TITANATE DOPED WITH CALCIUM AND ZIRCONIA.                     | 319    |

**S 08 - INKS AND GLAZES - 13:30-15:30****Chair: Kevin Knowles**

| Time        | Name   | Title   | ID Abs |
|-------------|--|---|--------|
| 13:30 14:00 | Cristina Siligardi<br><i>Invited Lecture</i> | HIGH REFLECTIVE GLASS CERAMICS FRITS FOR CERAMIC GLAZES   | 180    |
| 14:00 14:15 | Maria Chiara Bignozzi                        | DEVELOPMENT OF A CERAMIC COLOURED GLAZE CONTAINING ZIRCON AND STUDY OF THE EFFECTS ON SOLAR REFLECTANCE INDEX (SRI) | 805    |
| 14:15 14:30 | Chiara Ferrari                               | HIGH REFLECTIVE CERAMIC ENGOBES FOR INK-JET COOL ROOF GLAZES  | 648    |
| 14:30 14:45 | Oumessad Gridi                               | CHARACTERIZATION OF TREATED GLASS SURFACE BY OPTO-MÉCHANICAL TECHNIQUES   | 591    |
| 14:45 15:00 | Jakob König                                  | CRYSTALLIZATION IN FOAMED GLASSES   | 461    |
| 15:00 15:15 | Paolo Zannini                                | DEGRADATION, DUE TO MILLING, OF Cd, Se, Pr AND Sn BASED PIGMENTS FOR CERAMIC INKS                                   | 21     |
| 15:15 15:30 | Thanina Amiar                                | HIGH SHEAR RATE VISCOSITY MEASUREMENTS OF CERAMIC INKS BY VISUAL MICROFLUIDIC RHEOMETER                             | 844    |

**S 08 - INDUSTRIAL CERAMICS 4 - 16:00-18:00****Chair: Giuliana Bonvicini**

| Time        | Name                                    | Title  | ID Abs |
|-------------|---|--|--------|
| 16:00 16:30 | Alberto Viani<br><i>Invited Lecture</i> | CLAYS WITH NO CARBONATES IN BRICK MANUFACTURING: LINK MICROSTRUCTURAL AND MINERALOGICAL EVOLUTION TO FIRING CONDITIONS                                       | 84     |
| 16:30 16:45 | Halima Abjaghrou                        | VALORIZATION OF WOODEN FURNITURE WASTES TO IMPROVE THERMAL INSULATION OF FIRED CLAY BRICKS   | 859    |
| 16:45 17:00 | Fernanda Andreola                       | ECO-FRIENDLY BRICKS MANUFACTURED WITH CONSTRUCTION AND DEMOLITION WASTE (CDW)  | 841    |
| 17:00 17:15 | Renata Boris                            | EFFECT OF POZZOLANIC ADDITIVES ON HYDRATION PECULIARITIES OF PLASTICIZED OR NOT PLASTICIZED LIGHTWEIGHT REFRACTORY MATERIAL CONTAINING EXPANDED GLASS FILLER | 791    |
| 17:15 17:30 | Gianmarco Taveri                        | BIO-SINTERING OF AMORPHOUS SILICA BY HYDRO-PRESSURE DENSIFICATION  | 124    |





## Organizing Secretariat



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