

## 64 presentations from 19 countries

To finding co-authors, please refer to the proceedings, total no. includes "onsite" during opening session.

### Ceremonial lecture & 25 oral presentations

Oral presentations (Vxx) 25 min incl. 5 min discussion, Ceremonial lecture (CL-x) 45 min incl. 10 min discussion

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| CL-T | The Key and Solution for Sustainable Development in Industry : Recycle Wastes Into Resources via Green Process             | Dr. Chien-Yung Ma<br>Chairman   | Solar Applied Materials Technology Corp.<br>Tainan 70955<br>Taiwan  |
| V01  | Nanostructured Ferritic Alloys for Advanced Nuclear Reactors   | Prof. Dr. David T. Hoelzer<br>Senior Research Scientist                                       | Oak Ridge National Laboratory<br>Oak Ridge, TN 37831<br>USA   |
| V02  | Methodology for Maturity Evaluation of Powder Bed Additive Manufacturing Based on MRL and NDE                              | Dr. Ori Yehekel<br>Senior Research Scientist  | Nuclear Research Centre Negev<br>Be'er Sheva 84190<br>Israel  |
| V03  | Plant-derived isoprenes for technical applications   | Dr. Christian Schulze Gronover<br>Group leader  | Fraunhofer-Institute for Molecular Biology & Applied Ecology -IME<br>D-48143 Muenster<br>Germany  |
| V04  | ODS Steels for Energy Technology   | Prof. Dr. Anton Möslang<br>Director, Institute for Applied Materials IAM-AWP                  | Karlsruhe Institute of Technology - KIT<br>D-76344 Eggenstein-Leopoldshafen<br>Germany  |
| V05  | Requirements of the Russian Industry for High-tech alloys and Perspectives for their Application in Additive Manufacturing | Dr.-Ing. Peter Wilhartitz<br>Consultant   | Dr. Wilhartitz Co.<br>129594 Moscow<br>Russian Federation   |
| V06  | Hot Isostatic Pressing (HIP) - Latest Technology for Combined HIP / heat treatment of PM/AM Materials                      | Dipl.-Ing. Laurenz Ploechl<br>Business Development<br>Manager AMD                             | Quintus Technologies AB<br>SE-72166 Västerås<br>Sweden  |
| V07  | Nanotechnology adhesive bonding for carbon fiber reinforced plastics in aerospace structures - mission (im)possible ?      | Dr.-Ing. Jens Holtmannspoetter<br>Coordinator for Additive Manufacturing                      | German Armed Forces (BAAINBw/WIWeB)<br>D-85435 Erding<br>Germany  |
| V08  | The potential of mechano-chemical treatment for the recovery of resources from mineral residues                            | Dr. Carsten Gellermann<br>Head of Division Secondary Raw Materials                            | Fraunhofer Institute for Silicate Research - ISC<br>D-63755 Alzenau<br>Germany  |
| V09  | Technical and Economic Evaluation of Hydrogen Storage Systems based on Nanostructured Light Metal Hydrides                 | Dr. Julian Jeppsen<br>Materials Research Scientist  | Helmholtz-Zentrum Geesthacht - HZG<br>D-21502 Geesthacht, Germany<br>Helmut-Schmidt-University - HSU<br>University of the Federal Armed Forces at Hamburg, D-22043 Hamburg, Germany |
| V10  | Additive Manufacturing of Large Metallic structures using blown powder processes   | Dr. Erich Neubauer<br>Managing Director   | RHP-Technology GmbH<br>A-2444 Seibersdorf<br>Austria  |
| V11  | The Strategic Opportunities of Metal Powder for an Additive Manufacturing Age  | Dr. Min Cheol Kang<br>Executive Director  | 3D PRO - 3D Printing Research Organization<br>641-465 Changwon City<br>Republic of Korea  |
| V12  | Progress in Bimodal Nanopowder Processing  | Prof. Dr. Jai-Sung Lee<br>National Academy of Engineering of Korea,<br>Past President of KPMI | Hanyang University - ERICA Campus<br>Ansan, 426-791<br>Korea  |
| V13  | Pure Copper processed by Electron Beam Melting (EBM) technology for industrial applications                                | Luis Portolés Griñan<br>Senior Research Coordinator   | AIDIMME Instituto Tecnológico<br>Paterna (Valencia), 46980<br>Spain   |
| V14  | Mechanisms and conditions of chemical activity of the multiwall carbon nanotubes surface                                   | Dr. Alexander Ponomarev<br>Senior Researcher, Surface Technology                              | Russian Academy of Science Siberian Branch<br>634050 Tomsk<br>Russian Federation  |
| V15  | Additive Manufacturing parts design - present and future in Airbus   | Dr. Jens Telgkamp<br>Head of Additive Manufacturing R&T                                       | Airbus Operations GmbH<br>D-21129 Hamburg<br>Germany  |
| V16  | Metal hydrides for energy mega and micro systems   | Dipl.-Ing. Ilia Gvozdkov<br>Leading Engineer  | HeatLab Ltd.<br>432071 Ulyanovsk<br>Russian Federation  |
| V17  | Customizing powders for Additive Manufacturing   | M. Sc. Daniel Edman<br>Market Development Manager,<br>Additive Manufacturing                  | Höganäs AB<br>SE-26383 Höganäs<br>Sweden  |
| V18  | Durable PEM Fuel Cells with Ultra-Low Noble Metal Loading  | Dr. Ulrich Rost<br>Project coordinator hydrogen energy systems                                | Westphalian Energy Institute<br>D-45877 Gelsenkirchen<br>Germany  |
| V19  | Green nanotechnology for nanoparticles synthesis, nanocoatings and nanocomposites  | Prof. Dr. Witold Lojkowski<br>Head of Laboratory of Nanostructures                            | Institute of High Pressure Physics<br>PL-01-142 Warsaw<br>Poland  |

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| V20 | Nanomaterials for Effective Biochemical and Physical Sensing Technologies                                       | Prof. Dr. Cheng-Hsin Chuang<br>Director, Roll2Roll Imprinting<br>Flexible OptoElectronics                               | Southern Taiwan University STUST<br>71005 Tainan City<br>Taiwan  |
| V21 | Microcrystalline Diamond Films Fractality Exploring   | Prof. Dr. Vojislav V. Mitić<br>Director   | Institute of Technical Sciences of SASA<br>11000 Belgrade<br>Serbia  |
| V22 | Electronic properties of disordered 2D graphene   | Dr. Nadejda Bobenko<br>Researcher at ISPMS SB RAS   | Tomsk State University<br>634050 Tomsk<br>Russian Federation   |
| V23 | Hot Die Forming Aluminium - ultimate lightweight under highest forming freedom at substantial materials savings | Prof. Dr. Jürgen Hirsch<br>Chief Technology Officer<br>(CTO)  | HoDforming GmbH<br>D-40231 Duesseldorf<br>Germany  |
| V24 | Cold Spraying for Additive Manufacturing and Repair   | Prof. Dr. Thomas Klassen<br>Dean, Head of HSU Materials<br>Science Institute, Director HZG<br>Materials Technology Div. | Helmut-Schmidt-University - HSU<br>University of the Federal Armed Forces at<br>Hamburg, D-22043 Hamburg, Germany<br>Helmholtz-Zentrum Geesthacht - HZG<br>D-21502 Geesthacht, Germany |
| V25 | Making more with less & Concluding Remarks  | Prof. Dr. Henning Zoz<br>CEO & President  | Zoz Group<br>D-57482 Wenden<br>Germany   |

### 34 poster presentations

All posters will be on display during the entire Symposium right in the exhibition area.

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| P01 | Improved plant biomass for efficient biopolymer production<br>Co Dr. Gundula Noll                                       | Prof. Dr. Dirk Prüfer<br>Head of Plant Biopolymers &<br>Vice Dean                            | Fraunhofer-IME & Westp. Wilhelms-Uni.<br>D-48143 Muenster<br>Germany                |
| P02 | Improving the production process of Austenitic ODS Steels   | Dr. Jan Hoffmann<br>Materials Scientist  | Karlsruhe Institute of Technology - KIT<br>D-76131 Karlsruhe<br>Germany             |
| P03 | Multifunctional nanosystems for the theranostic treatments of the mammal cancer   | M.Sc. Mathias Pacaud<br>PhD Student  | Rhine-Waal University<br>D-47533 Kleve<br>Germany                                   |
| P04 | Electrospinning towards functional hybrid materials   | M.Sc. Viraj Pratap Nirwan<br>PhD Student   | Rhine-Waal University<br>D-47533 Kleve<br>Germany                                   |
| P05 | High Energy Ballmilling and Technology of Metal Matrix Composites Powder  | Prof. Dr. Xiaolan Cai<br>Faculty of Metallurgical and<br>Energy Engineering                  | Kunming University of Science & Technology<br>650093 Kunming, Yunnan<br>P. R. China |
| P06 | Spark Plasma Sintering - Introduction of Thermal Barrier Concept to the New Reproducible Way of Extrusion               | Dr. Ladislav Čelko<br>Deputy Head of Research<br>Group - Senior Researcher                   | Brno University of Technology<br>64999 Brno<br>Czech Republic                       |
| P07 | Durability & phase stability of YSZ coat with high porosity content & multilayer Mullite-YSZ/YSZ coat after HT exposure | Ing. David Jech<br>PhD student   | Brno University of Technology<br>64999 Brno<br>Czech Republic                       |
| P08 | MechanoChemistry - solvent-free Chemical Reactions by Simoloyer® Technology   | Dr. Birgit Funk<br>Scientific Director   | Zoz GmbH<br>D-57482 Wenden<br>Germany   |
| P09 | Mapping the tray of Electron Beam Melting (EBM) Ti-6Al-4V samples - Properties and Microstructure                       | Dr. Ori Yeheskel<br>Senior Research Scientist  | Nuclear Research Centre Negev<br>Be'er Sheva 84190<br>Israel                        |
| P10 | Metallurgy Europe: progress of the EUREKA cluster in the field of materials development and manufacturing               | Prof. Dr. H.-J. Fecht, Director<br>Institute Micro-Nanomaterials<br>EUREKA Metallurgy Europe | University of Ulm<br>D-89081 Ulm<br>Germany   |
| P11 | Building Sanjiwany Supersonic Aircraft Mach 3/7 with PM2000/PM2017 skin   | Rajesh Debie<br>CEO  | Night Queen Airlines NQA<br>1355 HT Almere-Haven<br>The Netherlands                 |
| P12 | Construction of the largest "Virgin of Guadalupe" statue in the world using High Performance Concrete.                  | Prof. Dr. Sebastián Díaz de la Torre, Director   | CIITEC-IPN<br>C.P. D.F. 02250 Santa Maria, Azcapotzalco<br>México                   |
| P13 | The potential of mechanical alloying to produce ultra-fine grained alloys for applications at elevated temperatures     | Prof. Dr. Ulrich Krupp<br>Head of Institute of Materials<br>Design & Structural Integrity    | Osnabrueck University of Applied Sciences<br>D-49076 Osnabrueck<br>Germany          |
| P14 | The Impact of Crushed Mineral Aggregate Water Absorption Value on the Required Properties of Road Pavement Concrete     | Prof. Dr. Vojislav V. Mitić<br>Director  | Institute of Technical Sciences of SASA<br>11000 Belgrade<br>Serbia                 |
| P15 | A Meteorite's Amorphization and Characterization Study using High Energy Milling Technique                              | Capt. Orlando Gutiérrez Obeso<br>Head of Research  | Escuela Militar de Ingenieros EMI<br>11400 Mexico D.F.<br>Mexico                    |
| P16 | Ultra High Performance Concrete applied to Mathematical Modeling for Structural Elements                                | Capt. Orlando Gutiérrez Obeso<br>Head of Research  | Escuela Militar de Ingenieros EMI<br>11400 Mexico D.F.<br>Mexico                    |

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| P17 | Market-driven technology development platform for Micro- & Nano Manufacturing companies                         | Dr. Xiang-Qian Zhou<br>CEO  | Shenzhen Sino-German Innovation Center<br>Shenzhen 518057<br>P. R. China              |
| P18 | HoDforming - a new hot die forming technology for high strength alloys  | Dr. Peter Amborn<br>CEO   | HoDforming GmbH<br>D-40231 Duesseldorf<br>Germany                                     |
| P19 | MechanoChemistry - Solvent-free Chemical Reactions by Simoloyer® Technology                                     | Dr. Birgit Funk<br>Scientific Director  | Zoz GmbH / Zoz Technology Center ZTC<br>D-57462 Olpe<br>Germany                       |
| P20 | High Kinetic Processing by Simoloyer® - efficiency and applications   | Dipl.-Ing. Hans Ulrich Benz<br>Member of Management                           | Zoz GmbH / Zoz Technology Center ZTC<br>D-57462 Olpe<br>Germany                       |
| P21 | H2-tank B4S - boron based nanostructured reactive complex metal hydride, semi-commercial incl. TÜV-approval     | M.Sc. Somnath Vijay Divanjee<br>Hydrogen, B4S & H2Tank2Go®                    | Zoz GmbH / Zoz Technology Center ZTC<br>D-57462 Olpe<br>Germany                       |
| P22 | Evaluation schemes for an improved control banding of nanomaterials   | M.Sc. Christian Schumacher<br>Head of unit Exposure Assessment                | Institute for occupational health & safety (IFA)<br>D-53757 Sankt Augustin<br>Germany |
| P23 | Nanorama - a virtual reality training for handling nanomaterial at the workplace                                | M.Sc. Christian Schumacher<br>Head of unit Exposure Assessment                | Institute for occupational health & safety (IFA)<br>D-53757 Sankt Augustin<br>Germany |
| P24 | TDC's precision technologies.   | Ms. Yuko Akabane<br>CEO & President   | TDC Corporation<br>Tokyo 101-0052<br>Japan  |
| P25 | Thin nano porous alumina layers based on aluminum films deposited from ionic liquids                            | Dipl.-Chem. Monika Lelonek<br>Managing Partner                                | SmartMembranes GmbH<br>D-06120 Halle<br>Germany                                       |
| P26 | Nanotun3D and Additive Manufacturing - Renaissance for Powder Technology, Challenge for HKP Advanced Composites | Alexander Zoz<br>Assistant to the Board                                       | Zoz GmbH / Zoz Technology Center ZTC<br>D-57462 Olpe<br>Germany                       |
| P27 | Zentallium® - status and challenges of a cost-effective lightweight material                                    | Mr. Koray Kuzkaya<br>R&D Division   | Zoz GmbH / Zoz Technology Center ZTC<br>D-57462 Olpe<br>Germany                       |
| P28 | Revitalization of Plansee's PM2000 ODS-alloy and further developing ODS/NFA                                     | Tom Zoz<br>Coordinator R&D  | Zoz GmbH / Zoz Technology Center ZTC<br>D-57462 Olpe<br>Germany                       |
| P29 | Towards additive manufacturing for nanomaterials  | Prof. Dr. Fabio Miani<br>Associate Professor of Metallurgy                    | University of Udine<br>I-33100 Udine<br>Italy   |
| P30 | ZnO nanostructures - growth, properties and their application in devices  | Prof. Mónica Tirado<br>Director Nanomaterials Lab.                            | Universidad Nacional de Tucumán<br>4000 S. M. de Tucumán<br>Argentina                 |
| P31 | Age hardening behavior of ODS steels  | Dr. Ravula Vijay<br>Scientist 'F' and Team Leader<br>Centre for Nanomaterials | Advanced Research Centre (ARCI)<br>Hyderabad - 500005<br>India                        |
| P32 | Recycling of valuable metals from steel mill dusts by mechano-chemical treatment                                | Dr. Gert Homm<br>Head of Dept. Urban Mining                                   | Fraunhofer Institute for Silicate Research - ISC<br>D-63755 Alzenau<br>Germany        |
| P33 | High-Performance and Durable Low Cost PEM Fuel Cell Electrodes based on Novel HGS Electrocatalysts              | Dr. Ivan Radev<br>Project manager<br>Electrochemistry & Coating               | ZBT GmbH - the fuel cell research center<br>D-47057 Duisburg<br>Germany               |
| P34 | Metal 3D printer development for excellent metal output   | Sung Min Kang<br>3D Team Leader   | Daegun Technology Co., Ltd.<br>Gyeongsangnam-do 51389<br>Korea                        |

All presentations:

Argentina, Austria, Czech Republic, China, Germany, India, Israel, Italy, Japan, Korea, Mexico, Netherlands, Poland, Russian Federation, Serbia, Spain, Sweden, Taiwan, USA