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Program at a glance

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**AMERICAN
ELEMENTS**

THE MATERIALS SCIENCE MANUFACTURER®

Monday, 21st September

Mantegna Media 1

08:15 Registrations

08:45 Opening talk

09:00 **Plenary Talk: Additive Manufacturing and Microstructural Manipulation of Ceramics**
Eduardo Saiz

Session 1.1 DIW Aerospace
(Chair: Pawel Falkowski)

09:45 Additive manufacturing of continuous-fiber reinforced CMCs - Riccardo Giometti

10:00 From Polypropylene Fiber to Carbon Fiber Reinforcement: Optimization of Geopolymer Inks and Structures for Direct Ink Writing - Chuhui Qin

10:15 GLAMS: Geopolymers for Lunar Additive Manufacturing and Sensing - Giorgia Franchin

Mantegna Media 2

Session 1.2 Material Jetting
(Chair: Bram Neirinck)

Micro Particle Jetting: Opportunities and Applications
Anna Katharina Hofer

Thermoplastic Material Jetting of Multimaterial Al2O3-based Ceramic Structures - Aljaž Iveković

Hall North

Session 1.3 Bioceramics 1
(Chair: Maria Canillas)

Fabrication of CaTiSiO₅ (Sphene) Scaffolds via Material Extrusion of Customized Pellets - Vanessa Gastaldi

Mitigation of crack formation in polymer-derived 70S30C Bioglass 3D scaffolds via sacrificial PDMS incorporation - Valeria Diamanti

PCL-Chitosan 3D fibrous Scaffolds Loaded with Nanohydroxyapatite as Biomimetic Platforms for Bone Regeneration - José Carlos Almeida

Coffee Break

Session 1.4 DIW Functional Architectures
(Chair: Giorgia Franchin)

11:00 Architected Ceramics: From Computational Design to Functional Applications
Alberto Ortona

11:30 Extrusion-based additive manufacturing of functional SiC-based supports via preceramic polymers processing - Eduardo Rosado

11:45 High-Temperature Latent Heat Thermal Energy Storage through Co-Extruded 3D-Printed Core–Shell Architectures - Lisa Biasetto

12:00 Core–Shell Robocasting of Multi-Material Ceramics - Larissa Wahl

12:15 Additive manufacturing and post-printing dealumination of geopolymers for methylene blue adsorption - Ana Caetano

Session 1.5 Sol-Gel
(Chair: Nicola Pinna)

Advanced Ceramic Coatings for Superior Electrocatalysis
Thomas Fischer

Sol-gel derived multicomponent ceramic powders for thermal spraying - Jonas Kral

High-Throughput-Inspired Mapping of the Spray-Drying Process: Unlocking Morphology, Phase, and Performance Correlations in LNMO Synthesis - Marc Brunet-Cabré

Preparation and properties of biomorphic C-SiC (scaffold)-TiN (particle)/NaCl-KCl composites for thermal energy storage prepared by combined sol-gel and molten salt infiltration methods - Min Yu

Porous Geopolymer Monoliths as a Novel Bulk Solid Adsorbent for CO₂ Capture - Luis Pérez Villarejo

Session 1.6 Bioceramics 2
(Chair: Enrico Bernardo)

Microtexturing of ceramic surfaces by laser ablation for its application in medical implants - Maria Canillas

Development and Evaluation of Dual Coating and Surface Texturing on Zirconia Dental Implants - Joana Mesquita-Guimaraes

Ti-based core-shell shaping for Ac-225/Bi-213 separation - Thomas Staes

Powder Injection Molding As A Scalable Near Net Shaping Technology for Lithium Disilicate Glass-Ceramics - Jochen Schilm

Hybrid copper(II)acrylate/silazane thin coatings with hydrophobic and germicidal properties - Mohamad Zahedtalaban

Poly(ε-caprolactone) hybrid bio nanocomposites for tissue engineering applications - José Carlos Almeida

12:30

14:00

14:15

14:30

14:45

15:00

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15:30

16:00

16:15

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17:15

Lunch

Session 1.8 Ceramics for Energy

(Chair: Gideon Grader)

Non-Hydrolytic Sol-Gel Chemistry to
Materials for Applications in Energy Storage
and Conversion
Nicola Pinna

Temperature-Dependent Electrocaloric and Energy Harvesting
Properties of 0.925BNT–0.075BT Ceramics and
Piezocomposites - Ezgi Yalçın

Influence of cubic and tetragonal zirconia on the tape casting
and mechanical performance of NiO–Zr1-xYxO2 fuel electrodes
of solid oxide cells - Antonio Alonso

Impact of the porosity’s distribution on gas transport and
mechanical strength of NiO-3YSZ supported SOFC electrode -
Cédric Bourgès

Session 1.9 Traditional ceramics

(Chair: Valentina Medri)

Optimizing Density and Precision:
The Technological Transformation
of Ceramic Powder Compaction
Riccardo Cenni

Development and Analysis of Sustainable Ceramic Formulations
Using Ceramic Residues and Machine Learning Models - Pietro
Merlin

Microwave sintering of waste-derived ceramic compositions
from tile manufacturing - Tulane Rodrigues da Silva

Formation of Surface Topography in Ceramic Coatings Using
Hydrophobic Inkjet Inks - Berkay Yazır

Layered Double Hydroxides for CO2 capture at medium-high
temperature: from powder to 3D monoliths - Margherita Cavallo

Coffee Break

Session 1.11 Colloidal processing

(Chair: Enrique Juste)

Transparent YAG ceramics by gelcasting: Benefits and
problems - Martin Trunec

From Slurry to Cake: In Situ OCT Visualization of Consolidation
in Alumina Slip Casting - Junichi Tatami

Colloidal processing of ZrO2/ZrSiO4 ceramic composites -
Rodrigo Moreno

Gel-Casting of Non-Oxide Ceramics for High Temperature
Applications - Ethan Ellis

Inkjet printing under electric field - Dorian Tourtoul

High-precision ceramic molding: producing next-generation
filters and membranes - Romain Trihan

Session 1.12 Innovative processing 1

(Chair: Hamada Elsayed)

The Duality of Ceramic Suspensions in Stereolithography:
Slurries vs. Pastes - Petar Kotevski

Transparent laser ceramics through non-conventional shaping -
Francesco Picelli

Ceramic waveguides as laser gain media formed by complex
YAG-based structures - Laura Esposito

Influence of post-thermal nitridation on AZO films - Malihe
Ghaffari

Attempts to Flash-Sinter Doped and Undoped MgO: Defect
Effects, Hotspots, and Breakdown Channels - Yoed Tsur

Session 1.7 DIW Functional Applications

(Chair: Mateus Morais)

Rheology-Controlled Direct Ink Writing of Ceramic–Metal
Monolithic Catalysts through One-Step Fabrication and Active-
Phase Incorporation - Gemma Fargas

Magnetically heated porous ceramics via fused filament
fabrication of preceramic polymer/magnetite composites -
Milan Vukšić

3D printed waste-derived alkali-activated materials as tunable
monolithic sorbents for heavy metal removal from acid mine
drainage - Mariana Almeida

Hybrid additive/subtractive manufacturing of technical
ceramics by Pellet Additive Manufacturing and five-axis
machining: sintering shrinkage, mechanical properties and
surface integrity - Pierre Grimaud

Fabrication of Multi-Scale Porous Silicon Nitride Scaffolds via
Direct Ink Writing - Yuping Zeng

Additive Manufacturing of Porcelain through Artificial
Intelligence and Liquid Deposition Modelling: AI assisted
workflows for porcelain design and creation - Gonçalo
Fernandes

Session 1.10 DIW Process and Environmental

(Chair: Andrea Zocca)

Direct synthesis and Additive Manufacturing of binderless
Zeolite A monoliths for efficient CO2 capture - Marco
D'Agostini

Shaping of Sitinakite into porous monoliths for strontium
removal in fixed-bed columns - Oumaima Zrioui

Mitigation of Staircase Effect in DIW-Printed Alumina Parts by
Post-Printing Processing - Bekir Gürkan Kaynak

Modeling of Ceramic Suspension micro extrusion using a
Volume of Fluid (VOF) approach - Gweni Alonso Aruffo

Tuesday 22nd September

Mantegna Media 1

Plenary Talk: Shaping and sintering of transparent ceramics for different applications
Shiwei Wang

Session 2.1 PDCs 1
(Chair: Stefan Schafföner)

Processing of carbon/ceramic hybrid materials for fiber manufacturing
Guenter Motz

Polymer-Fueled Flash Annealing of Metal Oxides - Thomas Berger

Mantegna Media 2

Session 2.2 AM for aerospace
(Chair: Lisa Biasetto)

Multi-Functional Ceramic Architectures for Aerospace and Energy Systems - Marco Pelanconi

Multi-material direct ink writing for the fabrication of plasma antenna electrodes - Anna De Marzi

Hall North

Session 2.3 Porous ceramics
(Chair: Manabu Fukushima)

Porous ceramic supports shaped by the drop casting method - Pawel Falkowski

Porous aggregates for light-weight thermal-shock resistant alumina castables - Tilo Zienert

'Mild' Alkali Activation of Glass Waste and Volcanic Ash for the Development of Sustainable Functional Materials - Francesco Carollo

Coffee Break

Session 2.4 PDCs 2
(Chair: Guenter Motz)

The Polymer-Derived Ceramics (PDC) concept towards functional inorganic materials for energy
Samuel Bernard

A novel curing process for manufacturing silicon carbide based fibers by polysilsesquioxanes only - Ken'ichiro Kita

2. Extensive Comparison of Melt-derived and Polymer-derived 38S55C6P Bioglass: from Additive Manufacturing to Biological Activity - Valeria Diamanti

Shaping novel monolithic and microspherical SiOC catalyst carriers by photopolymerization-assisted solidification templating - Katharina Rauchenwald

Session 2.5 GPs & AAMs 1
(Chair: Toru Luukkonen)

Industrial Geopolymers: Real-World Commercial Applications Across Multiple Sectors
Ralph Davidovits

Optimization of calcium-modified metakaolin geopolymers activated with hybrid alkali silicates - Samam Nadeem

Filament Gap Control for Fine Dense Layer Formation in 3D-Printed Chitosan-Geopolymer Structures - Angelo Oliveira Silva

Turning Ceramic Waste into Sustainable Lightweight Alkali-activated materials: Thermal, Mechanical and Durability Performance - Ali Hasnain

Session 2.6 Powder-based AM
(Chair: Marco Pelanconi)

Old understandings applied to new challenges: why do colloidal layers crack upon drying—and what can we do about it in slurry-based ceramic additive manufacturing? - Andrea Zocca

Thermal Anisotropy in Chopped Cf Reinforced SiC Composites by Laser Printing and Polymer Infiltration-Pyrolysis Techniques - Huisheng Tian

Additive Manufacturing of Silicon Carbide through In-Situ Reaction and Consolidation in Laser Powder Bed Fusion - Tsovinar Ghaltaghchyan

Fast laser processing of silicon carbide ceramic materials - Jie Yin

Additive Manufacturing of alumina using Binder Jetting: microstructural, mechanical and dielectric characterizations - Marie Beaujard

Reactive LPBF as a Route to Next-Generation Ceramic and Ultra-High-Temperature Materials - Marina Aghayan

Lunch

Wednesday 23rd September

Mantegna Media 1

Session 3.1 VPP Biomedical I
(Chair: Joana Mesquita-Guimaraes)

09:00	Novel Glass-bonded 3D-Printed Phosphate Bioceramics Supported by Silicone-based Emulsions - Enrico Bernardo
09:15	Hybrid Direct Ink Writing Of Polymer-Derived Baghdadite Scaffolds - Linda Furlan
09:30	Influence of Microneedles Spacing on Human Fibroblasts Response on Hydroxyapatite Patches for Oral Applications - Luís Pereira
09:45	TPMS Calcium Phosphate Scaffolds via Vat Photopolymerization: Structure- Property Relationships for Bone Regeneration - Giulia Verlato
10:00	Tailored pre-polymer blends for the development of zirconia-based photocurable resins: The key to highly translucent dental prostheses by DLP - Manuel Alves

10:15

Mantegna Media 2

Session 3.2 Sintering 1
(Chair: Vojtěch Nečina)

From powders to microstructures: challenges and opportunities of non-conventional sintering <i>Mattia Biesuz</i>
Ultrafast High-temperature Sintering of ceramic-metal composites: simulation and experimental testing - Ricardo Mineiro
Effect of c-BN addition on the Thermal Reactivity and Sintering Behaviour of Y-TZP Ceramics - Ana Henriques
Cold Sintering of Metakaolin-Based Geopolymers - Giovanna Rubo de Rezende

Hall North

Session 3.3 Innovative Processing 3
(Chair: Elettra Papa)

Intelligent Creation of Materials - Nian Ran
Sintering shrinkage behavior, microstructure evolution and property relationships in Gd2O3–MgO infrared transparent composite ceramics - Buhao Zhang
Shaping Functional Interfaces: Cold-Sprayed Al- and Ti-Based Interlayers for Laser Joining of Alumina to Metals - Heloisa Ramlow
BaTiO3 Nanoparticle-Derived Ceramic Microstructures produced by Polymer-fueled Flash Annealing - Kerstin Neuhauser
Electrical and Infrared Properties of SiC-TiB2 Composites - Ming Zhu

Coffee Break

Session 3.4 VPP Biomedical II
(Chair: Martin Schwentenwein)

11:00	VAT-printing of high-strength, high-fidelity Hydroxyapatite with low cost hobby SLA printers - Gurdial Blugan
11:15	From Highly Loaded Zirconia Resins to Ceramic Bone Implants: 3D Printing, Debinding, and Sintering of Complex Geometries - Weronika Wałczyk
11:30	ZnO 3D-printed porous structures for NH3 sensing - Wallia Majeed
11:45	Additive manufacturing of Cordierite electroceramics with reactive silicone-based binders - Annalaura Zilio
12:00	Fabrication of biomimetic shark skin structures via ceramic-loaded vat photopolymerization - India Marshall

12:15

Session 3.5 Sintering 2
(Chair: Mattia Biesuz)

Innovative Developments in Spark Plasma Sintering (SPS) Equipment Driven by Application Demands - Damian Karpowicz
Improving Thermoelectric Efficiency by Texturing Using Electrospun Nanoribbons and Spark Plasma Processing - Gideon Grader
Towards Laser-Grade Nd:YAG Transparent Ceramics by Spark Plasma Sintering - Dariia Chernomorets
Metal-Ceramic Laminates processed by Selective Powder Deposition and FAST/SPS sintering - Bram Neirinck
Optimization of Ultrafast High-Temperature Sintering for Gradient-Free Alumina Microstructures and Mechanical Performance - Aditya Arun

Session 3.6 AM Process Development I
(Chair: Giorgia Franchin)

A feasibility study of applying cellulose fiber as rheology modifiers of ceramic paste for direct ink writing - Ying Chung
Optimization of a Hybrid MEX Printing–Milling Process for Commercial CIM Feedstocks - Silvio Tisato
Multifunctional Roles of Binders in Alumina Direct Ink Writing - Bekir Gürkan Kaynak
Optimization of a Partially Water-Soluble Highly Filled Alumina Feedstock for Ceramic Fused Filament Fabrication - Thomas Heim
Fabrication of High-Performance SOFCs Monolithic Assemblies via Multi-Material DLP 3D Printing - Anastasiia Novokhatska

Lunch

	Session 3.7 VPP for Energy and Electronics (Chair: Mihails Kusnezoff)	Session 3.8 Sintering 3 (Chair: Mattia Biesuz)	Session 3.9 AM Process Development II (Chair: Laura Esposito)
14:00	Additive Manufacturing of Aluminum Nitride Ceramics for Advanced Thermal Management Applications <i>Martin Schwentenwein</i>	Transparent CaF ₂ ceramics by cold sintering: The effect of liquid phase chemistry - Matyáš Mikula	3D structuring of ZSM-5 zeolite bodies using interparticle photo-cross-linkable suspension and their catalytic performance - Shogo Tsutaki
14:15		Quartz ceramics: Revisiting pressure solution of quartz sand in the context of cold sintering - Vojtěch Nečina	Visualizing microstructural heterogeneity in DLP-3D printed transparent ceramic green bodies - Motoyuki Iijima
14:30	Digital Light Processing of Barium Titanate Structures for Miniaturization in Electronics - Poly Rose	Cooling Pressure Controls Microstructure and Mechanical Properties in Cold-Sintered ZnO - Salvador Rea	Water-based ceramic slurries for VAT Photopolymerization - Mario Borlaf
14:45	Carbide targets for ISOL Facilities via Digital Light Processing: Fabrication and Performance Evaluation of TiC/C and SiC/C Nanocomposites - Luca Avanzi	Simplified Low-Temperature Fabrication of NiO–YSZ/YSZ/LSM–YSZ Full SOFCs via Spray Coating and Cold Sintering Process - Tuğçe Uçun Demirsöz	Vat Photopolymerization of Low Stabilized Zirconia - Dagmara Uhl
15:00	Digital light processing 3D-printed Copper/SiOC ceramic log-pile scaffolds metamaterials for electromagnetic wave absorption - Xuehan Ma		Overcoming Debinding Limitations in Ceramic Vat Photopolymerization - Jošt Oblak
15:15	Additive manufacturing of multifunctional micro-architected ZnO - Peiren Wang		Influence of Coloring Metal-Oxide Additives on Robocasting and Vat Photopolymerization of Ceramic Parts - Swantje Funk
15:30	Coffee Break		
	Session 3.10 AM Process Development III (Chair: Rodrigo Moreno)	Session 3.11 Emerging AM Technologies (Chair: Hamada Elsayed)	Session 3.12 Innovative Processing 4 (Chair: José Carlos Almeida)
16:00	Direct selective laser sintering and properties of SiC ceramics doped with Al ₂ O ₃ -Y ₂ O ₃ - Jiayi Geng	3D-printed bone substitutes: From pore-based to Triply periodic minimal surface-based microarchitectures - Franz Weber	Microstructure Regulation, Densification Mechanism, and Mechanical Properties of High-Entropy Carbide Ceramics - Yujin Wang
16:15	Performance optimization of vat photopolymerization 3D printed SiO ₂ -based ceramic cores - Xinyan Yue	Additive manufacturing of glass materials using binder jetting - Enrique Juste	Rapid sintering of additive manufactured multi-material ceramic parts - Tobias Prötsch
16:30	Additive manufacturing of calcium carbonate corals for coralporosis studies - Mateus Morais	Development of Aqueous Zirconia Suspensions for Vat Photopolymerization - María Valero Saiz	Sintering of low expansion ceramics from glass powders - Mihails Kusnezoff
16:45		Additively Manufactured 2Y-TZP Zirconia Dental Ceramics: Influence of Building Orientation on Mechanical Properties and Low-Temperature Degradation - Tjaša Okleščen	Nb-Al ₂ O ₃ composites used as high-temperature heating elements for refractory applications - Tilo Zienert
17:00		Additively Manufactured Pyrolytic Carbon/SiOC Ceramic Hierarchical Hybrid Metamaterials for Ultra-Broad Electromagnetic Absorption - Heqiang Liu	Multi-Material Zirconia Ceramics with Improved Flexural Strength Obtained by Selective Powder Deposition - Bram Neirinck

Posters

The poster session will be held on Tuesday 22nd September at 16:00

Additive manufacturing

- 37 Ti-based core-shell shaping for Ac-225/Bi-213 separation - Vanessa Gastaldi
- 100 Engineered binder-modified diopside glass suspensions for dense, low-defect glass-ceramics via vat photopolymerization - Ana Caroline Batista Pires
- 105 Influence of Printing Parameters on the Structural Integrity of Dense Alumina and Zirconia Ceramics Produced by FFF - Ana Paula da Luz
- 109 3D printing of porous waste-glass architectures: From designed gyroids to foamed hierarchical structures - Uroš Hribar
- 112 Effect of Calcination Temperature on the Rheological behaviour of Hydroxyapatite Slurries for Digital Light Processing - Elham Zafarrazaghnia
- 122 Processing and Properties of 3D Printed MgO–CaO Waste Refractories - Hana Ovcacikova
- 124 Development of low-carbon 3D-printed permanent formworks for complex refractory precast components - Camille Zoude
- 136 Extruder with Variable Nozzle Diameter for Robotic 3D Printing of Refractory Materials - Hana Ovcacikova
- 143 Preparation of Highly Filled Suspensions for Digital Light Processing of SiC Ceramics - Tomaž Ivančič
- 144 Geometry–Microstructure Coupling in DLP-Printed SiOC/a-SiC TPMS Diamond Metastructures for Broadband Electromagnetic Absorption - Junbin - Lu
- 154 DLP Printing of SiO₂ Fiber-Reinforced PEGDA-Based Composites - Linda Rstakyan
- 160 Tracking curing gradients in photocurable suspensions for DLP printing via optical coherence tomography - Misato Takahashi
- 164 DLP 3D printing of complex-shaped copper oxide/porous alumina catalysts via interparticle photo-cross-linkable suspensions - Fumiya Yokomori
- 165 Polyethyleneimine-assisted sulfation of DLP-3D printed zirconia for structured solid acid catalysts - Akihito Ide
- 179 From vat photopolymerization to pyrolysis: key parameters affecting printability and carbon segregation in polysiloxane-derived ceramics - Angelina Pronina
- 180 Edu-GARd3n: Education for Sustainable Ceramic 3D Printing - Carolina Oliver-Urrutia
- 195 Engineering polymer-derived nanoemulsions to reinforce bioactive glass-ceramic bone scaffolds - Barbora Nikendey Holubova
- 198 Towards Optimal Bone Regeneration: Scaled-Up Bioactive Glass Production for Additive Manufacturing of amorphous 3D parts by DLP - Guillaume Marchal
- 199 New Generation Micro Gas Turbine Ceramic Recuperators: Design for Fabrication via Digital Light Processing (DLP) - Francesca Mazzanti
- 201 Development of an alumina-based ceramic slurry with a safer visible-light photoinitiating system for Digital Light Processing (DLP) Additive Manufacturing - Enrico Leoni
- 208 Integrated X-ray Computed Tomography, Additive Manufacturing, and Geopolymer Casting for Cultural Heritage Conservation - Ekaterina Sokolova
- 220 Feasibility of 3D printing SiC from submicrometer powder - Carlos Fortulan

- 238 ML-Driven Patient-Specific Gyroid Bone Scaffolds: From DEXA/CT Classification to Micro-CT Validated Additive Manufacturing - Joana Mesquita-Guimaraes
- 275 3D-printed structures based on carbon nanotubes/polylactide composites modified with hydroxyapatite - Maciej Sitarz

Colloidal processing

- 244 Drop casting of ceramic microbeads with tunable size and performance - Blanka Nowicka
- 247 Ceramic supports for anchoring catalysts for hydrogen production from ammonia - Paulina Wiecinska
- 250 Porous alumina beads obtained by drop-casting as potential catalyst supports for ammonia decomposition - Zofia Skowronska
- 256 3D-printed catalysts for efficient CO_x-free hydrogen production - Joanna Tanska
- 257 Gel-Casting of Non-Oxide Ceramics for High Temperature Applications - Ethan Ellis
- 270 Ceramic catalysts for ammonia decomposition: characterization using a dual-beam microscope combined with TOF-SIMS - Piotr Wiecinski

Industrial and ecological aspects of ceramics shaping

- 123 Design of Interior Elements from Waste Materials Using 3D Ceramic Printing Technology - Hana Ovcacikova

Innovative shaping processes

- 64 Challenges in Co-Axial Direct Ink Writing of Metal–Ceramic Core–Shell Structures - Thomas Staes
- 183 Empowering Sustainability Through Green Additive Manufacturing Education "Edu-GARd3n" - Hamada Elsayed
- 274 Temperature–Time Control of CVD Pyrolytic Carbon Fiber-Interface Coatings for High-Temperature Ceramic Matrix Composites - Hossein Libre
- 284 Development of Tailored Ceramic Matrix Composites For Lightweight Aerospace Structures - Kieran Nash

Plastic forming

- 262 Recycled Aggregates from CDW: a novel approach for properties tuning - Chiara Molinari

Powder processing

- 49 Manufacturing of ceramic membranes for hydrogen separation from syngas - Vittoria Marzaroli
- 137 Densification mechanisms and kinetics of various ceramics during cold sintering - Vojtěch Nečina
- 172 Room-temperature Consolidated Calcium Phosphate Bioceramics as Drug Delivery Systems - Linda Dauge
- 206 Tuning freezing behavior and granule properties of silicon nitride slurries by polyethyleneimine-oleic acid complexes in spray freeze granulation drying - Riko Yamazaki
- 214 Cyclic Warm Isostatic Pressing of Ceramic Powders for Enhanced Green Density and Homogeneity - Rio Tatami
- 294 Ultrafast high-temperature sintering and synthesis of high-entropy electrolytes - Mattia Biesuz

Subsequent processing

- 243 Calcination-Driven Evolution of Tetragonal Coherence in Microwave-Derived CuCr₂O₄ Spinel Powders - João Batista Rodrigues Neto