yCAM 2026

Ljubljana, Slovenia – 11-13 May 2026

PROGRAMME AT A GLANCE

Monday, 11th May 2026

08:00	**Registration**
OPENING -- Chaired by: Anna De Marzi and Johanna Müller-Elmau	
08:45	**Welcoming**
Applications I -- Chaired by: Antonia Ressler and David Grossin	
09:00	Additive Manufacturing of Ceramics for Dental and Biomedical Applications – current status and future perspectives – Franziska Schmidt
09:30	Biomedical Breakthrough: Revolutionising Spinal Fusion Surgeries – Charlie Clark
09:50	In vitro model fabrication using VAT and DIW: optimization of rheology across additive manufacturing processes – Flora Navaux
10:10	**Coffee break**
Applications II – Chaired by: Antonia Ressler and Giorgia Franchin	
10:50	Off-Earth Resource Utilisation: Harnessing Space Clays for Ceramic Processing and Additive Manufacturing – David Karl
11:20	Effects of sintering temperature on density, mechanical properties and cell proliferation of hydroxyapatite scaffolds produced by vat photopolymerization – Giorgio Goretti
11:40	Beyond planar electrolytes – opening up new dimensions in solid oxide cells through additive manufacturing -- Sayan Chattopadhyay
12:00	**Lunch**
Vat Photopolymerization I – Chaired by: Charlie Clark and Johanna Müller-Elmau	
13:00	Photocurable Sol–Gel Formulation for the Fabrication of Silicon Carbide/Carbon Nanocomposite via Digital Light Processing – Luca Avanzi
13:20	Additive Manufacturing of Bioceramics: Mg-Doped Biphasic Calcium Phosphates – Vincent Gillet
13:40	High Resolution Digital Light Processing of Reactive Ceramic–Polymer Scaffolds – Roberto Fagotto-Clavijo
14:00	Towards Optimal Bone Regeneration: Scaled-Up Bioactive Glass Production for Additive Manufacturing of amorphous 3D parts by DLP – Guillaume Marchal
14:20	Poster Session I and Coffee break
Vat Photopolymerization II – Chaired by: Charlie Clark and Johanna Müller-Elmau	
15:40	Additive Manufacturing of Functionalized Multi-Material Scaffolds for Bone Regeneration – Giulia Verlato
16:00	Additive manufacturing of electrified monolithic reactor for ammonia cracking – Milan Vukšić
16:20	Enabling Rapid Debinding and Thick-Wall Fabrication in Ceramic VPP via Simple Slurry Formulation - Jošt Oblak
16:40	3D printing of the Hybrid Silicon Carbide/Carbon Fiber Nanocomposites using Digital Light processing – Saja Al-Ajrash
17:00	Additive manufacturing of multifunctional micro-architected ZnO – Peiren Wang
17:35	**yCAM 2026 Group Photo**
18:00	**Welcome reception**

Tuesday, 12th May 2026

Material Extrusion I – Chaired by: Nicolas Somers and Wolfgang Freudenberg	
09:00	Process Optimization of Multimaterial 3D Printing of Mullite-Based and Nickel composite filaments - Jana Záchenská
09:20	Investigation of Field-Assisted 3D Printing of La–Co Co-Doped Strontium Hexaferrite for Permanent Magnet Applications – Uma Mahesh
09:50	Direct Ink Writing of Textured Barium Titanate: Process-Microstructure-Property Control - Gaurav Vajpayee
10:00	Additive Manufacturing of Lithium Disilicate Glass-Ceramics for Dental Applications - Belkıs Güneş Kara
10:20	**Coffee break**
Material Extrusion II – Chaired by: Mathilde Maillard and Marco D'Agostini	
10:50	Development of porcelain stoneware pastes incorporating sintered endogenous ceramic waste for robocasting applications on ceramic tiles industry – Tulane Rodrigues da SIlva
11:10	Application of additive manufacturing for innovative UO2 nuclear fuels - Ivan Mestrallet
11:30	Tailoring of printable bone filling cements for their reactive paste extrusion via robocasting - Bertille Belleville
11:50	Red mud as a functional additive in 3D-printed γ-Al2O3-based catalytic ceramics - Gemma Cruz Ortega
12:10	**Lunch**
Material Jetting – Chaired by: Lisa Freitag and Csilla Csipkó	
13:00	Ceramic additive manufacturing by micron sized droplet jetting of thermoplastic feedstocks - Ipeknaz Özden Moser
13:20	Binder jetting of calcium zirconate refractories using a water-based binder and functional additives – feedstock and process development – Lisa Freitag
13:40	Design of Spray-Dried Ceramic Granules for Binder Jetting and Interpenetrating Phase Composites – Francesco Bertolini
14:00	Poster Session II and Coffee break
Technology – Chaired by: Hamada Elsayed and Anna De Marzi	
15:00	3D volume morphology characterization of additive manufactured ceramic materials using advanced automated DualBeam technology – Min Wu
15:20	Debinding strategies for FFF-printed $BaTiO_3$ composite filaments - Peter Veteska
15:40	Fast microwave treatment of zirconia parts printed by FDM - Axel Krzyzaniak
16:00	Using Two-Photon Polymerization of Ceramics as a Template for Digital Workflow Integration – Tom Rousseau
17:00	**Guided Tour @Križanke** - Trg francoske revolucije 1, 1000 Ljubljana, Slovenia
19:00	**Gala Dinner @ Pivnica Union Pub** - Celovška cesta 22, 1000 Ljubljana, Slovenia

yCAM 2026 is sponsored by:

JECS Trust

ITRLAB JUST FOCUS

ThermoFisher SCIENTIFIC

sinto

3DCERAM

AKRAPOVIČ

SILKEM

AMERICAN ELEMENTS THE MATERIALS SCIENCE MANUFACTURER®

Wednesday, 13th May 2026

ERC grants – Chaired by: Anna De Marzi and Johanna Müller-Elmau	
09:00	My path to a successful ERC project application - Dominik Kozjek
09:30	ERC project and the mystery behind - Matevz Dular
10:00	Coffee break
Analysis – Chaired by: Luca D'Andrea and Mathilde Maillard	
10:30	Strength Testing, Fracture Statistics, and their Relevance for Defect Analysis - Maximilian Staudacher
11:00	Mechanical characterizaton of 2-materials ceramic structures for bone regeneration produced through Vat-Photopolymerizatiion – Martina Colombo
11:20	A Novel Specimen shape for Fracture Characterization of 3D-Printed Hydroxyapatite – Leire Viana
11:40	When Ceramics Flow: Science Behind Rheological Behavior and Stability of Zirconia Suspensions for Digital Light Processing - Patrik Sokola
12:00	**YCN Presentation**
12:15	**Closing of yCAM 2026**

POSTERS!

Session 1 – Monday 11th May – 14:20

8 Stereolithography-Printed TiO2-Resin Composites for Photocatalytic Degradation of Pharmaceuticals - **Paola Grobenski**

18 Vat photopolymerization of preceramic polysiloxanes towards SiOC ceramics with varying carbon content - **Angelina Pronina**

27 Lithography-based Ceramic Additive Manufacturing of 2Y-TZP Zirconia Dental Ceramics - **Tjaša Okleščen**

30 Additive manufacturing of acid-activated geopolymer adsorbents for heavy metal adsorption - **Mariana Almeida**

40 Biocompatible Ceramic–Polymer Composite Scaffolds Fabricated by DLP Using Natural Hydroxyapatite - **Liana Mkhitaryan**

47 Multimaterial 3D printing of Bioceramics - **Přemysl Šťastný**

56 Lead-free piezoelectric parts: BaTiO3 shaping through VAT photopolymerization and Laser Powder Bed Fusion - **Margaud Rivière**

63 Digital Light Processing of Zirconia-Based Ceramics with Tailored Porosity Gradients - **Darya Farrokhnemoun**

69 Precision-optimized DLP 3D printing and mechanical performance of ultra-thin zirconia dental veneers - **Wuyuan Zhao**

71 Fracture toughness and flexural strength of 3D-printed HA/Al_2O_3 composites reinforced with ‚plate-like' particles - **Eliska Siska Viragova**

72 Merwinite Scaffolds with Tailored Architecture and Antibacterial Functionality Fabricated by Robocasting - **Gabriela Ionita**

75 LSD-print of multicolored dental restorations by zirconia - **Janett Hilgenfeld**

77 Direct Ink Writing of Ni/γ-Al2O3 catalysts for CO2 methanation - **Seyed Ali Razavi**

83 Robocasting of Akermanite Based Scaffolds for Bone Tissue Grafting - **Maria Eliza Puscasu**

89 Additive manufacturing of zirconia-based gyroid structures by vat photopolymerization - **Cristian Leonardo Franco Gallo**

92 Vat photopolymerisation of porous bone scaffolds based on bioinert and bioactive ceramics - **Andrey Tikhonov**

93 Direct Ink Written Carbon-Regulated SiOC Ceramic Architectures for X-Band Electromagnetic Absorption - **Heqiang Liu**

95 Effect of talc as a sintering additive on the properties of hydroxyapatite-based composites for biomedical scaffolds - **Roman Fialka**

97 Additive Manufacturing of Ceramic Biomimetic Bone Models for Surgical Training - **Julia Apel**

103 Ceramic additive manufacturing for advanced prosthetic dentistry: material performance and clinical translation - **Tadej Mirt**

106 Flexural Strength of Milled and 3D-Printed Ceramic-Based and Composite Materials: Influence of Printing Orientation - **Jerneja Vonča**

113 Optimalization of crystallographic texture in barium titanate ceramics prepared by combination of DLP 3D printing and templated grain growth - **Jan Pišťák**

119 Biomimetic Ceramic-Polymer Hybrids: Advancing Dental Materials through Vat Photopolymerization - **Sergio Baya**

123 Fabrication of Enamel-Inspired Composites by Polymer infiltration of SiOC Columnar Ceramic Structures Produced by DLP - **Sergio Moreno-Martínez**

125 Influence of Surface Oxidation of SiC Powders on the Printability of Highly Filled Suspensions using DLP - **Tomaž Ivančič**

128 Optimizing Burnout and Sintering in MSLA-Printed Phosphor-in-Glass: The Role of Glass Particle Size - **Andrea Cibrínová**

134 **Effects of Lunar** environmental conditions on structural elements produced by Direct Ink Writing of regolith-based geopolymers - **Marco D'Agostini**

137 The impact of post-processing procedures on the color masking ability of 3D-printed hybrid ceramic material for definitive implant-supported restoration: An in vitro study - **Zhen Mao**

105 Preparation of Hybrid Ceramic Implants Combining Additive Manufacturing and Direct Foaming - **Pavlína Šárfy**

37 Advancing silicon carbide additive manufacturing via laser powder bed fusion and polymer infiltration and pyrolysis: Towards high-performance, near-net shape ceramic components - **Waut Declercq**

152 Additive Manufacturing of Electroactive Bioceramic Scaffolds via Digital Light Processing - **Athanasios Goulas**

Session 2 – Tuesday 12th May – 13:50

3 Study of the 3D printing of ferrite on mechanical properties - **Marine Brocheton**

10 Additive-Manufactured Porous Ceramic Structures for Passive Vapor Extraction in Micro-Apartments A Conceptual Application Study - **Csilla Csipkó**

16 Two-Photon Polymerization of Ceramics: Micro-Scale Mechanical Properties - **Anna Linden**

20 Comparative Study of Al_2O_3 Ceramic Samples Fabricated Using Fiber Laser and CO_2 Laser Powder Bed Fusion - **Geethapriyan Thangamani**

31 DIW of Fiber-Reinforced Geopolymers: Rheology Optimization and Mechanical Toughening Mechanisms - **Chuhui Qin**

35 Tailored frequency acoustic panels - **Lidija Korat**

44 Integrating Synthesis and Additive Manufacturing in Polymer-Derived Bioglasses - **Linda Furlan**

45 Extruder with peristaltic mechanism for printing fast-setting and reactive silicate materials - **Adam Boleslavský**

52 Surface Modification of 3D-Printed Geopolymers via Dealumination for Methylene Blue Removal - **Ana Caetano**

61 Effects of Nozzle Cross-Section on Printed Track and Part Quality - **Matyáš Machalla**

67 Empowering Sustainability Through Green Additive Manufacturing Education "Edu-GArD3n" - **Hamada Elsayed**

68 Large-Scale Binder Jetting of Waste-Derived Geopolymers for Energy Storage and Fire-Resistant Construction - **Hamada Elsayed**

70 Additive manufacturing of ceramic matrix composites based on the fused filament fabrication - **Wolfgang Freudenberg**

76 Low-temperature additive manufacturing of filler-free polysiloxane-based feedstocks for polymer-derived ceramics - **Mussadiq Shah**

85 Thermoplastic Material Jetting of Paraffin-wax-based Alumina Suspensions - **Pia Popovič**

87 Formulation and Characterization of Experimental Waste-Derived Pastes for 3D Printing Applications - **Marija Kovač**

91 Rheological Behavior and Shape Retention of Alumina-Based Pastes for the Fabrication of Dense Components via Direct Ink Writing - **Thiago Wisley Barbosa de Farias**

100 Determining the curing behavior of ceramic suspensions for cost-effective Liquid Crystal Display-Stereolithography printing - **Tim Stötzel**

101 Analysis and optimization of slurry rheology and curing for DLP 3D printing of biphasic ceramics - **Albina Murashko**

102 Optimization of composition and processing conditions of zeolites/polylactide filaments **- Jakub Marchewka**

117 Microwave-Assisted Production of High Entropy Oxide Powder Feedstocks for Ceramic Additive Manufacturing - **Daniel Perello**

118 Influence of Additive Manufacturing Technology on the Porous Architecture and CO_2-Related Structural Properties of CaO-Functionalized Ceramic Monoliths - Quico Viciano Yuste1, Mrs. **Cristina Fabuel Bartual**

120 Additive Manufacturing of Glass-Contact Refractories by Direct Ink Writing and Their Corrosion Behavior in Barium Cristallin Glass - **Sheeraz Khan**

127 Optimizing Monetite and Brushite in Extrusion-Printed Hydrogels for Bone Tissue Engineering - **Andreea Trifan**

138 Reaction bonded technical ceramics via binder jet 3D printing - **Julia Bolten**

139 Integration of XµCT and Additive Manufacturing for the Restoration of Cultural Heritage Using Geopolymer Binders - **Ekaterina Sokolova**

148 Effect of particle morphology and ink rheology on printability in DIW - **Enrica Luzzi**

25 Bone grafts with tunable resorbability : multi-material additive manufacturing combining Digital Light Processing (DLP) and inorganic binders - **Somers Nicolas**

22 Expanding Silicon Carbide Additive Manufacturing through Slurry-based LPBF: Process Innovations and Material Benefits - **Mira Sinée**

19 Nano-Hydroxyapatite–Reinforced Ceramic Hybrid Scaffolds with hDPSCs for Bone Tissue Engineering - **Ana Sousa**