

FINAL PROGRAM of 2nd International Congress on Aerogel Inspired Materials
27-29 September, 2023 Donostia – San Sebastián, Spain (Jose Mari Korta Edificio, Tolosa Hiribidea 72)

Legend: Plenary lecture Invited lecture Coffee Break, Lunch, Dinner Social Event Public Lecture

27th September, 2023 8:30 - 9:00 h Registration

9:00 – 10:00 h Opening Plenary Lecture <u>Prof. KAZUKI NAKANISHI</u> : Mechanical resilience and transparency of siloxane-based hybrid aerogels
10:00 – 10:50 h Invited Lecture <u>Dr. CEDRIC GOMMES</u> : The electrical impedance of hierarchical carbon xerogel electrodes
10:50 – 11:20 h Coffee Break
ORAL PRESENTATIONS
11:20 – 12:00 <u>Dr. GALIT BAR</u> : Characterizing surface adsorbed moisture on silica aerogel reveals the remarkable effect of the supercritical drying procedure employed
12:00 – 12:20 <u>Dr. MIHAIL PETKOV</u> : Purification of silica aerogels
12:20 – 12:40 <u>FABIAN ZEMKE</u> : Ambient pressure drying of silica aerogels investigated by in-situ synchrotron X-ray scattering
12:40 – 13:00 <u>ZEINEB BEN REJEB</u> : Molecular Engineering of Innovative Multifunctional and Soft Bridged-Silica Aerogels
13:00 – 13:20 <u>Prof. PETRA HERMAN</u> : Functionalised aerogels for the selective sorption of specific metal ions
13:30 – 19:00 h Visit of a winery with lunch included. Bodega Ameztoi (https://txakoliameztoi.com)

28th September, 2023

9:00 – 10:00 h Plenary lecture <u>Dr. MARCUS A WORSLEY</u> : Aerogels, additive manufacturing, and electrochemical energy storage
10:00 – 10:50 h Invited Lecture <u>Dr. RAZ GVISHI</u> : Exploring new ways to use aerogel in optics, space, alternative energy & bio-medical applications
10:50 – 11:20 h Coffee Break
ORAL PRESENTATIONS
11:20 – 11:40 <u>Dr. EVA VAN KLAVEREN</u> : Fiber-reinforced inorganic aerogels for space applications
11:40 – 12:00 <u>Dr. MARTA OCEJO</u> : Novel sustainable aerogel production technology
12:00 - 12:20 <u>NINA BORZECKA</u> : How accurately can silica aerogels be computationally modelled?
12:20 - 12:40 <u>Dr. GUY LAZOVSKI</u> : Hot Super-Critical Drying of Aerogels – How to Tackle the Challenges & Achieve the capability
12:40 - 13:00 <u>HENRIK TOFTE JESPERSEN</u> : Sustainable fuel production CCUS using NPS as catalyst
13:00 – 14:00 Lunch
14:00 – 15:00 Plenary Lecture <u>Prof. MARY CARROLL</u> : Inspired by aerogels: an interdisciplinary research journey
ORAL PRESENTATIONS
15:00 – 15:20 <u>MAGI METTRY YASSA</u> : Detailed approach for high transparency, thermal insulator polyimide aerogels and their applications
15:20 – 15:40 <u>Prof. AMEYA REGE</u> : Material modelling of cellulose aerogels prepared from biowaste
15:40 – 16:00 <u>Dr. STEVE DE POOTER</u> : Aerobel: manufacturer of aerogel materials via a first-of-its-kind vertically integrated process
16:00 – 16:30 Coffee Break

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16:30 – 18:00 POSTER SESSION

Monika Fidanchevska Title: Engineering of reduced graphene oxide and its polymer composite aerogels for high performance CO₂ adsorbents

Jessica Kröner. Title: Influences of mechanical and structural properties on specific capacity in lithium-sulfur batteries

Danny Bialuschewski Title: Investigation of different hydrophobic silica aerogel granules as potential aggregate in concrete

Resul Fener Title: Development of novel aerogel materials and their processing in applicable polymer-based pastes and polymer-textile composite systems

Johannes Kresse Title: Understanding the impact of synthesis parameters and their Interplay on the gelation behavior on metal aerogels

Cui Wang Title: Engineering metal aerogels for highly efficient H₂O₂ production

Farida Baraka Title: Cellulose nanofibers coated with an aromatic amine for CO₂ capture

Silvina Regenhardt (Oihane sanz) Title: Synthesis of silica aerogel for insulating materials applied to the construction industry

Guy Lazovski Title: Silica aerogels with exceptional transmission & zero shrinkage

Oscar Castillo Title: Metal-organic gels and aerogels (MOGs and MOAs)

Ana María Muñoz Title: Structured reactors of reduced graphene oxide for CO₂ adsorption

Barbara Milow Title: Polyvinylidenfluoride aerogels – first investigations

Lidija Šiller Title: Synthesis and characterisation of in-situ, encapsulated silica xerogel microsphere materials

PUBLIC LECTURE on 28th September, 2023

19:00 – 20:00 h **PUBLIC LECTURE “STARDUST RAISED TO THE POWER OF ART”** Kutxa Espacio en Tabacalera, Donostia-San Sebastian

Presenters: **Dr. MIHAIL PETKOV**, NASA, USA and **Prof. IOANNIS MICHALOUDIS**, American University of Cyprus

20:00h Conference Dinner (Tabacalera, Donostia - San Sebastian, Restaurant LABE)

29th September, 2023

9:00 – 10:00 **Plenary Lecture Dr. JAANA VAPAAVUORI**: Porous plant-based functional materials – first steps towards carbon-negativity

10:00 – 10:50 **Invited Lecture Dr. SHANYU ZHAO** “Nature inspired Fire Drone – multi-environment aerial robot”

10:50 - 11:20 Coffee Break

ORAL PRESENTATIONS

11:20 – 11:40 **THOMAS ANKLAM**: Synthesis of hydrophobic trimethoxybenzene-formaldehyde gels – controlling the microstructure

11:40 – 12:00 **LEIGH PELES**: Modular metal-bipyridine based conjugated aerogels as catalysts for oxygen reduction reaction

12:00 – 12:20 **Dr. ADAM DZIERBINSKI**: Preparation and characterization of carbon aerogels as electrode materials for battery applications

12:20 – 12:40 **Dr. CHRISTIAN SCHERDEL**: Structural variation in silica aerogels ranging over two decades– challenges and limits

12:40 – 13:00 **Dr. STEPHEN STEINER**: Industrial applications of commercial polyimide aerogel composites: Airloy HR and Airloy HT

13:00 – 13:30 Conference closure; Announcing of best oral presentation and best poster presentation

13:30 - 15:00 Lunch