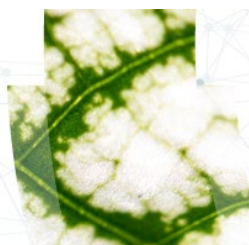


Frontiers in physical chemistry for lignin valorisation

10–12 September 2025 | London, UK



Faraday Discussions

Wednesday 10 September

11:00	Registration
12:00	Lunch
12:45	Welcome and introductions Roberto Rinaldi, <i>Chair of Scientific Committee</i>
12:55	Outline of Discussion format Konoya Das and Sophie Mander, <i>Royal Society of Chemistry Publishing Editors</i>
13:00	Introductory Lecture – Spiers Memorial Lecture (Session chair: Claudia Crestini) Organic, physical & polymer aspects pivotal in lignin valorization Dimitris Argyropoulos <i>North Carolina State University, USA</i>
	Session 1 Native lignin solvation and extraction (Session chair: Seema Singh)
14:00	Title tbc Martin Lawoko <i>KTH Royal Institute of Technology, Sweden</i>
14:05	Analyzing π-π stacking interactions in lignin nanoparticles from molecular simulations – insights and lessons learned Malin Wohler <i>Uppsala Universitet, Sweden</i>
14:10	Comparison of bottom-up and top-down precipitation strategies for lignin nanoparticles obtention from organosolv and ionosolv eucalyptus globulus liquors Victoria Rigual <i>Complutense University of Madrid, Spain</i>
14:15	Discussion
15:30	Refreshments
16:00	Bond dissociation energies of lignin-carbohydrate complexes Thomas Elder <i>USDA-Forest Service, Southern Research Station, USA</i>
16:05	Organosolv processing of Sitka Spruce sawdust: Large scale preparation of native-like lignin and LigninOX for valorisation Nicholas Westwood <i>St Andrews, UK</i>
16:10	Supramolecular interactions in softwood kraft lignin nanoparticles Massimo Sgarzi, Massimo <i>Ca' Foscari University of Venice, Italy</i>
16:15	Discussion
17:30	Lightning presentations (by invitation of the Scientific Committee)
18:00	Poster session and wine reception
19:30	Close of sessions

Thursday 11 September

	Session 2 - Lignin stabilisation and degradation in lignocellulosic fractionation processes (Session chair: Roberto Rinaldi)
09:00	Title tbc Huizhen Liu <i>Chinese Academy of Sciences, China</i>
09:05	Catalytic lignin conversion for holistic valorization Ning Li; Feng Wang <i>Dalian Institute of Chemistry Physics, China</i>
09:10	Investigation of the electro-oxidation of lignin model compounds using in situ ATR-IR spectroscopy with a chamber-separated cell Sibylle Schwartzmann <i>ICC, Utrecht University, The Netherlands</i>
09:15	Discussion
10:30	Refreshments
11:00	Title tbc Heiko Lange <i>University of Milano-Bicocca, Italy</i>
11:05	Advancing biomass conversion: insights into lignin and hemicellulose dynamics via MultiCP quantitative solid-state NMR Guan Jianyu; Leu Shaoyuan <i>The Hong Kong Polytechnic University, Hong Kong</i>
11:10	Predictive modeling and optimization of lignin yield and quality in Birchwood ethanosolv fractionation in a semi-continuous flow-through reactor Amponsah Preko Appiah; Peter J Deuss <i>University of Groningen, The Netherlands</i>
11:15	Discussion
12:30	Lunch
	Session 3 - Commercially available technical lignins (Session chair: Claudia Crestini)
13:30	Title tbc Joseph Samec <i>Stockholm University, Sweden</i>
13:35	Lignin-alcohol blends as sustainable marine fuel and feedstock for fluid catalytic crackers Michael Boot <i>Vertoro, The Netherlands</i>
13:40	Understanding structure-property relationships in lignin-derived carbon nanofibers for freestanding supercapacitor electrodes Robert Hunter <i>Imperial College London, UK</i>
13:45	Discussion
15:00	Refreshments
15:30	Paving the way for understanding the role of lignin molecular weight Veronica Calado <i>Federal University of Rio de Janeiro, Brazil</i>
15:35	From dark to light: Light-coloured lignin for cultural heritage conservation Camila Alves Rezende <i>University of Campinas – UNICAMP, Brazil</i>
15:40	The use of kraft lignin to enhance nanocellulose films properties Raquel Martín-Sampedro; Antonio Ovejero-Pérez <i>Institute of Forest Science (INIA-CSIC), Spain</i>
15:45	Discussion
17:00	Close of sessions
18:30	Pre-dinner drinks
19:00	Conference dinner

Friday 12 September

	Session 4 - Strategies for compatibilisation of extracted lignin properties with commercial applications (Session chair: Jean-Pierre Lindner)
09:00	Lignin as Bisphenol-A replacement in epoxy resins: challenges and opportunities Mojgan Nejad <i>Michigan State University, USA</i>
09:05	Advancing the fundamentals of water dynamics in lignin-based epoxy anticorrosive coatings Narayanan Rajagopalan <i>CoaST - Denmark Technical University (DTU), Denmark</i>
09:10	Controllable synthesis of lignin-derived graphene-like carbon materials for electrochemical energy applications Xiaoyu Wu; Wenting Liu <i>Shenzhen Polytechnic University, China</i>
09:15	Discussion
10:30	Refreshments
11:00	Title tbc Agnieszka Talbot <i>Imperials College London, UK</i>
11:05	Enhanced antioxidant properties of lignin-modified silver nanoparticles with plasmonic photothermal activation Leonidas Matsakas <i>Luleå University of Technology, Sweden</i>
11:10	Tuning ester derivatives of organosolv vs technical lignin for improved thermoplastic materials Yevgen Karpichev <i>Tallinn University of Technology (TalTech), Estonia</i>
11:15	Discussion
12:30	Concluding remarks lecture (Session chair: Roberto Rinaldi) Katalin Barta <i>University of Graz, Austria</i>
13:00	Acknowledgements
13:15	Close of meeting and lunch

Please note that this is a draft programme and timings may change.