



a hub for materials research

ReMade@ARI workshop on

"Laser Spectroscopy and Photonic Technologies for Circular Economy: Advancing Sustainable Innovations in Material Research and Diagnostics"

Location: "C. Fotakis" Seminar Room, FORTH Main Building
Institute of Electronic Structure and Laser (IESL), N. Plastira 100,
Vassilika Vouton, 700 13, Heraklion, Crete

Thursday 19 June 2025

08:30-09:00	Registration	
09:00-09:10	Welcome by organizers	
09:10-09:20	Welcome by IESL Director & IESL-FORTH Presentation	Emmanouel Stratakis IESL-FORTH, Greece
09:20-09:30	ReMade@ARI: a hub for materials research	Mary Konstantaki IESL-FORTH, Greece
09:30-09:50	Mobile and Remote Analysis of Materials using Laser Spectroscopy	Demetrios Anglos IESL-FORTH & Uni. of Crete, Greece
09:50-10:10	Applications of Lasers in Materials Processing for Sustainable Clean Energy Solutions	Panagiotis Loukakos IESL-FORTH, Greece
10:10-10:30	SUNRISE Project: Multisensor System based on Advanced Characterization Spectroscopic Techniques for Laminated Glass Sorting and Recycling	Angelica Perez (<i>Virtual</i>) CT Lurederra, Spain
10:30-10:50	Optical and Spectroscopic Techniques in Polymer Recycling	Eleni Pavlopoulou IESL-FORTH, Greece
10:50-11:20	Coffee break	
11:20-11:40	PHOTO-GREEN Project: Aesthetic PHOTO- recharGeable stoRage cEll Fabricated via prEcision laser maNuufacturing	Maria Pervolaraki IESL-FORTH, Greece
11:40-12:00	Laser Processing and its applications for the Circular Economy	Juraj Sládek HiLase, Czechia
12:00-12:20	Advanced Materials for High-Efficiency, Low-Cost, and Low-Power Gas Sensors	Vassilios Binas IESL-FORTH & Arist. Uni. of Thessaloniki, Greece
12:30-13:30	IESL Lab tour	
13:30-15:00	Lunch	
15:00-15:20	Contributions of Molecular Spectroscopy and Computational Chemistry to a Sustainable and Circular Economy	Licinia L. G. Justino (<i>Virtual</i>) Uni. of Coimbra, Portugal



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15:20-15:40	Hyperspectral Imaging and Microscopy	Cristian Manzoni, IFN-CNR, Italy
15:40-16:00	Experimentation of Real-Time Plastic Detection	Monica Moroni Sap. Uni. of Rome, Italy
16:00-16:20	Fluorescence Lifetime Imaging and Spectroscopy for Material Analysis	Gianluca Valentini Politecnico di Milano, Italy
16:20-16:40	Light, Sensing, and Sustainability: The Circular Potential of Optical Fiber Sensors	Mary Konstantaki IESL-FORTH, Greece
16:40	1 st day closing remarks	

Friday 20 June 2025

	Industry Session	
09:00-09:20	Luminescent Solar Concentrators for Building-Integrated Photovoltaics	Francesco Meinardi Glass to Power, Italy
09:20-09:40	Industrial Constraints when using Spectroscopy as enabler of Textile Recycling	Valerio Verderio Circularity, Italy
09:40-10:00	The Uphill Road to Exploiting Patented Research Results	George Kiriakidis PCN Materials, Greece
10:00-10:20	Drones Agricultural Spraying Operations – Risk Mitigation and Efficacy Boost using Photonic Technology	Stelios Christodoulou IONOS, Greece
10:20-10:40	Moving to a circular economy: the need for new technologies and advanced materials	Alexandros Stefanakis Technical Uni. of Crete, Greece
10:40-11:00	Coffee break	
	Demonstration/ Hands On Sessions	
11:00-11:45	Group I: Hyper-spectral Imaging	Cristian Manzoni, IFN-CNR, Italy Gianluca Valentini, Pol. Milano, Italy
11:00-11:45	Group III: Laser Spectrosc. Techniques	Victor Pinon, IESL-FORTH, Greece Agg. Philippidis, IESL-FORTH, Greece
12:00-12:45	Group II: Hyper-spectral Imaging	
12:00-12:45	Group I: Laser Spectrosc. Techniques	
13:00-14:30	Lunch	
14:30-15:15	Group III: Hyper-spectral Imaging	
14:30-15:15	Group II: Laser Spectrosc. Techniques	