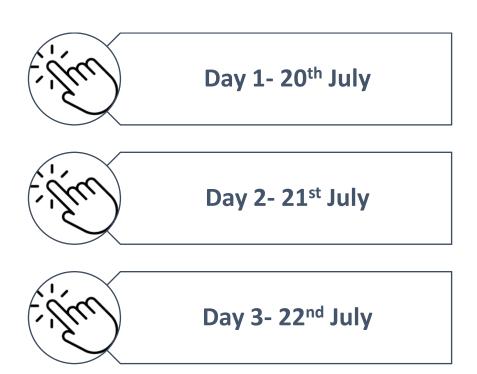


# Scientific program



### **Areas**

#### A. Functional Materials

- A.1. Nanomaterials (0D to 3D)
- A.2. Flexible and porous materials
- A.3. Smart and self-healing materials
- A.4. Surfaces & Interface
- A.5. Energy and environment materials
- A.6. Biomaterials and healthcare
- A.7. Sensors & Actuators
- A.8. Materials for catalysis
- A.9. Photonics and plasmonics
- A.10. Magnetic, electric and electronic materials

#### **B. Structural Materials**

- B.1. Metamaterials
- B.2. Advanced steels and cast irons
- B.3. High-performance alloys and intermetallics
- B.4. High entropy alloys
- B.5. Advanced ceramics
- B.6. Carbon based materials
- B.7. Composites and nanocomposites
- B.8. Fatigue, wear and corrosion

#### C. Processing Technologies

- C.1. Coatings and surface (nano)modification
- C.2. Advanced metallurgical processing
- C.3. Thermomechanical processing and severe plastic deformation
- C.4. Advanced ceramic processing
- C.5. Green polymer processing
- C.6. Synthesis of nanomaterials
- C.7. Powder technologies
- C.8. Direct and indirect additive manufacturing
- C.9. Joining

#### D. Characterization and Modelling

- D.1. Advanced techniques with focused beams
- D.2. Characterization of nanomaterials
- D.3. Micro- and Nano-mechanics and modelling
- D.4. Atomic scale modelling of advanced materials
- D.5. Multiscale and multiphysics modelling of materials, processes and products
- D.6. Modelling of Additive Manufacturing

#### E. Materials for Sustainability

- E.1. Critical raw materials
- E.2. Materials addressing the 3R (Reduce, Reuse, Recycle)
- E.3. Carbon-neutral production of materials
- E.4. Bio-based materials
- E.5. Materials circular economy



## Program

## July 20<sup>th</sup>, 2022



08:30	Entrance hall of the FCTUC building		
	Registration	· ·	
09:00	Main Auditorium		
	Opening session		
09:30	Main Auditorium		
	Chair: Prof. Sandra Carvalho, PT		
	Plenary session	•	
	=	versidade Nova de Lisboa, Po	rtugal
	<u>-</u>	here functionality meets sust	_
10:15	End of Plenary lecture	nere functionality meets sust	amaomey
10.13	End of Fichary feeture		
Suc	Auditorium A	Auditorium B	Auditorium C
sic			
Ses	Functional Materials	Structural Materials	Materials for
<u> </u>			Sustainability
Parallel Sessions	Chairs: Maria Gimenez, ES	Chairs: Marco Belfi, IT and	Chairs: Jéssica Santos, PT
Ра	and Diogo Cavaleiro, PT	Nuno Figueiredo, PT	,
		Traile i igaeireae, i i	and Edgar Carneiro, PT
10:30	A1-ID11	B1 - ID120	E1-ID176
10.50	Annalisa Fortini	Sulayman Khan	Sunčica Sukur
	Development and testing	Development of Advanced	Potentially Sustainable
	of a SMA-based proof of	High Modulus Steels for	Way for Neutralization
	concept bending micro-	Automotive Applications	and Iron Recovery from
	actuator	Automotive Applications	Red Mud
	actuator		inca ivida
	University of Ferrara, Italy	The University of Sheffield,	University of Banja Luka,
	oniversity of Ferrara, Italy	United Kingdom	Bosnia and Herzegovina
		_	_
10:45	A2-ID163	B2 - ID159	E2 - ID184
	Fabio Lazzari	César Fernández-Jiménez	Jéssica Santos
	Shape memory soft	Computational design of	Potato washing slurries-
	actuation exploiting	alumina-forming	derived starch used in
	multimaterial	martensitic stainless steels	the development of
	functionalization: design		aerogel microparticles
	and control		with ethylene scavenging
			capacity
	Institute of Condensed Matter	National Metallurgical Research	University of Aveiro, Portugal
	Chemistry and Tecnologies for	Centre, Spain	
44.00	Energy, Italy		
11:00	Coffee break		

11:30	A3-ID167	B3 - ID164	E3- ID27
	Maria Gimenez	Marco Belfi	Abel Ourgessa
	A New Supramolecular	Feasibility study on	Preparation of
	Liquid for Energy-Storage	quenching and partitioning	geopolymer material
	Applications	treatment on 33MnCrB5	from used AZS refractory
	••	boron steel	and unrecycled glass
			fibers
	Universidade de Santiago de Compostela, Spain	Politecnico di Milano, Italy	Alexander Dubcek University of Trencin, Slovakia
11:45	A4- ID148	B4 - ID86	E4-ID83
	João Vareda	Berzah Yavuzyegit	Gianluca Dall'Osto
	Chitosan modified silica	An in-situ study of grain	Pathways for the Italian
	aerogels for the	boundary migration and	Steel Industry of the
	adsorption of pollutants	sliding in AZ31 magnesium	Future: Possibilities and
		at elevated temperatures	Criticalities
	University of Coimbra, Portugal	The University of Manchester, United Kingdom	Politecnico di Milano, Italy
12:00	A5- ID28	B5 - ID90	E5-ID132
	Mafalda Valente	Adam Strnad	Martin Reimer
	Sodium and Potassium ion	Microstructure and	Cellulose-based
	rich ferroelectric solid	mechanical properties of	biopolymer optical fibers
	electrolytes for electrode-	zirconium alloys	and their theoretical
	less structural batteries		attenuation limit
	University of Porto, Portugal	Charles University, Czechia	Technical University of Munich, Germany
12:15	A6-ID191	B6 - ID49	E6-ID139
	Paulo Nunes	Eliška Jača	Matthias Langhansl
	Sol-gel derived di-ureasil	The effect of vanadium on	Cottonid – a forgotten
	based ormolytes for	the high-temperature	biogenic material with a
	electrochromic devices	oxidation of complex concentrated alloys	promise
		FeAlCrNixVy	
	University of Trás-os-Montes e	Charles University, Czechia	Technical University of
	Alto Douro, Portugal	Charles Offiversity, Czecilla	Munich, Germany
12:30	A7- ID113	B7 - ID193	E7-ID141
	Diogo Pereira	Gianluca Di Egidio	Gianluca Utzeri
	Advanced waste-based	Response to Different	Amine-cyclodextrin-
	magnetic activated carbon	Artificial Aging Conditions	based nanosponges –
	towards the removal of	of the As-built and Rapid	novel polymeric sorbent
	ubiquitous emerging	Solubilized AlSi10Mg Alloy	materials
	contaminants from	Produced by Laser-Based	
	wastewater	Powder Bed Fusion	
	University of Aveiro, Portugal	University of Bologna, Italy	University of Coimbra, Portugal

12:45	A8 – ID207	E8 - ID59	
	Maxim Ivanov	Vladislav Slabov	
	Surface treatment of	Biosurfactants for	
	stainless steel 316L	separation of ultrafine	
	towards poly(L- lactic) acid	mineral particles	
	polymer adhesion		
	Hairanita of Araina Dantaral	Name and their continues	
	University of Aveiro, Portugal	Norwegian University of Science and Technology,	
		Norway	
13:00	Location: Mechanical Engineer	ing Department	
	Lunch Break		
14:30	Main Auditorium		
	Chair: Prof. Natalia Sobczak,	PL	
	Keynote session		
	Prof. Federico Bella, Politec	nico di Torino, Italy	
	Electrochemistry for energy	conversion, storage and integration for a self-powered	
	society		
15:00	Main Auditorium		
	ERC Day		
	Prof. Rodrigo Martins, NOV	A University Lisbon	
	Materials and the Creativity	Challenges for a Better Green Sustainable World	
17:00	Dostor Cossion		
	Poster Session		
18:30	Location: Mechanical Engineering Department		
	Sunset Party		



### July 21<sup>st</sup>, 2022

	I				
08:30	Entrance hall of the FCTUC buil	lding			
00.45	Registration				
09:15	Main Auditorium  Chair: Prof. Fric. le Bourbis E	:D			
	·	Chair: Prof. Eric le Bourhis, FR			
	Plenary session	ChiomoGUNE Spoin			
	Prof. Luis M. Liz-Marzán, Clo	cial tumors: A lifetime scientifi	c iournov		
10:00	End of Plenary lecture	dai tumors. A metime scientin	c journey		
	Auditorium A	Auditorium B	Auditorium C		
ons	Additorialii A	Additorialii B	Additorium C		
ssic	Functional Materials	Characterization and	Processing technologies		
Se		modeling			
<u> </u>	<b>Chairs:</b> Emmanuel Fodeke,		<b>Chairs:</b> John Hernandez, ES		
Parallel Sessions	FR and Anna Boufina, GR	Chairs: Guy Bowker, UK and Anna Mantelli, IT	and Sebastião Barros, DE		
10:15	A9-ID44	D1 - ID63	C1 - ID4		
	Emmanuel Fodeke	Adrian Boccardo	Huda Al-Jurani		
	Investigating the	Accelerating phase-field	Scale Development and		
	mechanical behaviour of	microstructure simulations by	Inhibition on Sugar Cane		
	MoS <sub>2</sub> thin films under	combining Fourier transforms	Heat Exchangers		
	stress	and parallelization on graphic			
		cards			
	University of Poitiers, France	National University of Ireland,	University of Manchester, United Kingdom		
10:30	A10-ID100	D2 - ID69	C2 - ID30		
10.50	Deepti Raj	Guy Bowker	Ahmed Hashem		
	Dense and Mesoporous	Modelling the	Ion-exchanged borosilicate		
	FePd Nanowires as	Microstructure Evolution	glass vials for		
	Excellent SERS-active	During Hot Working of	pharmaceutical packaging		
	Substrates	Titanium Alloys	Programme Programme		
	Università di Torino, Italy	University of Manchester,	Alexander Dubček University of		
		United Kingdom	Trenčín, Slovakia		
10:45	A11-ID169	D3 - ID195	C3 - ID156		
	Helena Pereira	Anna Mantelli	John Hernandez		
	MgO nanoparticles	Effect of casting	Antibacterial		
	obtained by Pulsed Laser	parameters and geometry	hydroxyapatite/silver		
	Ablation in Liquid - a study	on 26-ton ingot defects evaluated by numerical	composite coatings onto		
	on fabrication versatility	simulation analysis	mechanically improved		
	aiming different applications	Simulation analysis	TiMoNbTa alloy: evaluation and optimization of		
	αμμιιτατίστις		electrodeposition processes		
	University of Minha Portugal	University of Pressie Halv			
	University of Minho, Portugal	University of Brescia, Italy	Universitat Autònoma de Barcelona, Spain		

6

11:00	A12-ID125	D4 - ID45	C4 - ID70
	Anna Boufina	Yohan Douest	Sebastião Barros
	Modification and	Glass forming ability	The influence of Cu <sup>2+</sup> on
	Characterization of Ag and	exploration of Ti-based	SaOS-2 and human
	CuO Nanofluids for Stability	bulk metallic glass systems	mesenchymal stromal cells
	Control and Thermal	using machine learning	
	Conductivity Enhancement	tools	
	Aristotle University of Thessaloniki, Greece	Anthogyr SAS, France	Technical University Dresden, Germany
11:15	Coffee break		
suc	Auditorium A	Auditorium B	Auditorium C
Parallel Sessions	Functional Materials	Structural Materials	Processing technologies
<u>8</u>	Chairs: Ekaterina	Chairs: Monika Jawańska,	Chairs: Aikaterini Baxevani,
<u> </u>	Vinokurova, DE and Akrity	PL and Manuel Evaristo, PT	GR and Gregory Marcos, FR
ara	Anand, SK		
11:30	A13-ID147	B8 - ID112	C5 - ID162
	Stavroula Maritsa	Gonçalo Gorito	Aikaterini Baxevani
	Study of Casting and	The role of boron on the	Hydrophobic silver coated
	Selected Thermal Processes	microstructure and	copper foams suitable for
	in a Copper Based	properties of a Ni-Si-B	oil/water separation
	Multicomponent Alloy	casting alloy	applications
	National Technical University of Athens, Greece	University of Porto, Portugal	Aristotle University of Thessaloniki, Greece
11:45	A14-ID211	B9 - ID149	C6 - ID106
	Ekaterina Vinokurova	Callum Andrew	Mariana Silva
	Crystal growth and	Characterization of	UV absorbing transparent
	electrochemical	Zirconium alloys with	coatings in glass matrices
	intercalation of a	Copper and Vanadium	
	frustrated magnet α-RuCl₃	additions for nuclear fuel	
		assembly materials	
	Technische Universität Dresden, Germany	The University of Manchester, United Kingdom	University of Aveiro, Portugal
12:00	A15-ID18	B10 - ID71	C7 - ID16
	Akrity Anand	Roger Castellote-Alvarez	Corentin Tousch
	Multifunctional copper and	Cu-Mn cosegregation in	Incorporation of carbon
	strontium co-doped	MnCrFe <sub>2</sub> Ni <sub>2</sub> base HEAs	nanotubes in alumina
	mesoporous bioactive glass:	produced by different	layers grown by plasma
	Preparation, characterization and bioactivity	manufacturing routes	electrolytic oxidation
	Alexander Dubček University of Trenčín, Slovakia	Centro Nacional de Investigaciones Metalúrgicas, Spain	Institut Jean Lamour, France

12:15	A16-ID131	B11 - ID94		C8-ID33
12.13	Vipin Richhariya	Monika Jawa	ńska	Gregory Marcos
	Anti-slipping Winter Shoe-	Improving the		Stainless steels patterning
	soles: A Nature Inspired	resistance of		by selective etching in ICP
	Solution	alloys via add		chlorine-based plasmas
	Solution	reactive elem		chorne based plasmas
		l reactive elem	CIICS	
	University of Minho, Portugal	AGH University of Technology, Pol		Institut Jean Lamour, France
12:30	A17-ID206	B12-ID146		C9 - ID168
	Rita Gaspar Fonseca	Tomáš Tayari	İ	Alexandre Silva
	Photo-degradable, tough	The occurren	ce of atypical	A machine learning
	and highly stretchable	serrated flow	in entropy	solution to the texture
	hydrogels	alloys		optimization problem
	University of Coimbra, Portugal	Charles Universi	ty, Czechia	University of Minho, Braga
12:45		B13 - ID183		
		Pablo Saint-L	aurence	
		Microstructur	re and	
		mechanical p	roperties of	
		light-weight r	efractory	
		high-entropy	alloys	
		fabricated by	powder	
		metallurgy		
		Technical Unive		
42.00	La catione Marchanical France	Catalonia, Spain		
13:00	Lunch Brook	ring Department		
14:30	Lunch Break  Main Auditorium			
14.50	Chair: Prof. Paula Vilarinho,	DТ		
	Chair. From Faula Vilarinino,			
	Keynote session			
	Prof. Goreti Sales, Universit	ty of Coimbra.	Portugal	
	Innovative designs in (bio)se	=	_	
15:00	Main Auditorium		Sala do Consell	10
	FEMS Master Thesis Award			
			Satelite Event	
	Nerea García de Albeniz (SC	CIEMAT)	B	IOREMIA opean Training Network
	Ivânia Trêpo (SPM)		Eur	opean Trainina Network
	Chrysoula Aivalioti (HSSTCM	•		
	Yann Bami-Chatener (SF2M)	)		
16:15	Poster Session			
17:00	Coffee Break		<u> </u>	

sions	Auditorium A	Auditorium B	Auditorium C
Ses	Functional Materials	Structural Materials	Processing technologies
Parallel Sessions	<b>Chairs:</b> Nerea García de Albeniz, ES and António Delgado, UK	<b>Chairs:</b> Íris Carneiro, PT and Jacopo Romanò, IT	<b>Chairs:</b> Sandra Cruz, PT and Jan Dittrich, CZ
17:15	A18-ID95 Young Researcher Award António Delgado ATR-FTIR/Micro-Raman Spectroscopy are powerful techniques to disclose chemistry and polymerization of novel smart self-adhesive composites	B14 - ID150 <b>Íris Carneiro</b> Deformation behavior of CNT reinforced metal matrix nanocomposites	C10 - ID64  Jan Dittrich  Analysis of the texture influence on deformation behavior of a rolled AZ31 magnesium alloy
	University College London, United Kingdom	University of Porto, Portugal	Charles University, Czechia
17:30		B15 - ID68 Érika Maria Leite de Sousa Sustainable process to produce waste-based activated carbon by microwave pyrolysis for the removal of antibiotics	C11 - ID153  Adam Greš  Deformation Mechanisms in Pure Heat-treated Polycrystalline Cobalt with Different High Temperature FCC Phase Content
17:45	A19-ID79  Tim Kreuz  Synthesis and Characterization of Silicate and Zinc Co-Substituted Hydroxyapatite  University of Cambridge, United Kingdom	University of Aveiro, Portugal B16 - ID92 João Pinto Hydrothermal Ageing Behavior of Bioinspired Material with Piezoelectric Functions for Implant Applications University of Minho, Portugal	Charles University, Czechia C12 - ID199 Florian Spieckermann Structure-dynamics relationships in cryogenically deformed bulk metallic glass  Montanuniversität Leoben, Austria

18:00	A20-ID80	B17 - ID14	C13 - ID51
	Francisca Fonseca	Katie Buchanan	Stanislav Šašek
	Improving the interface	Characterisation of	Magnesium alloys
	between orthopedic	Advanced Metal Matrix	containing yttrium,
	implants and bone - a	Composite Materials for	gadolinium and calcium
	comparison between	Application to High Energy	processed by Equal
	different surface	Physics Detectors	Channel Angular Pressing
	treatments	,	(ECAP)
			,
	University of Minho, Portugal	CERN, Switzerland	Charles University, Czechia
18:15	A21	B18 - ID17	C14 - ID25
	Todor Vuchkov	Jacopo Romanò	Angelika Cerny
	Upscaling of self-	Combining non-linearities	Towards electrically
	lubricating W-S-C coatings	to affect the damping	assisted manufacturing of
	deposited by magnetron	behaviour of fibre-	light metal and steel parts
	sputtering	reinforced polymer	on a semi-industrial scale
		composites	
	Instituto Pedro Nunes	Institute of Condensed Matter	Austrian Institut of Technology,
		Chemistry and Technologies for	Austria
10.00		Energy, Italy	
18:30	A22-ID174	B19 - ID75	C15 - ID15
	Kamil Kleszcz	Marzieh Ghadamyari	Niall Hughes
	Tackling implant	Luminescent YAG: Er	Dispersoid Evolution
	infections: chitosan layers	microspheres used for	During Homogenization in
	loaded with gold	preparation of phosphor in	5XXX Alloys. Effects of
	nanoparticle conjugated	glass materials	Composition, Micro-
	with gentamicin for		segregation, and Modelling of Strengthening
	orthopedic applications		or strengthening
	AGH University of Science and	Alexander Dubček University of	University of Manchester,
10.45	Technology, Poland	Trenčín, Slovakia	United Kingdom
18:45	A23-ID180	B20 - ID101	C16 - ID26
	Akhilesh Rai	Beatriz Maia	Jorge Robles
	Near-infrared light-	High-performance	Physical and computational
	responsive nanoparticles as an efficient carrier to	multifaceted materials:	simulation of Functionally Graded Materials
	cross the blood-brain	structural approaches for Li-ion batteries	Graded iviaterials
	barrier	Li-ion batteries	
	Darrier		
	University of Coimbra, Portugal	INEGI - Institute of Science and	IMDEA Materials Institute, Spain
		Innovation in Mechanical Engineering and Industrial	
		Engineering, Portugal	
19:00	End of Parallel Sessions		
20:00	Location: Tertúlia d'Eventos, C	oimbra	
	Conference Dinner		
L			

### July 22<sup>nd</sup>, 2022



09:00	Entrance hall of the FCTUC building		
	Registration		
09:30	Main Auditorium		
	Chair: Prof. Gian Luca Garagnani, IT		
	Plenary session Prof. Maria Clelia Righi, Bologna University, Italy		
	Advancing Solid Interfaces	s and Lubricants by First Princi	ples Materials Design
10:15	End of Plenary lecture		
sions	Auditorium A	Auditorium B	Auditorium C
Parallel Sessions	Functional Materials	Characterization and modeling	Processing technologies
Paral	<b>Chairs:</b> Yen Fred Woguem, FR and Luísa Fialho, PT	Chairs: Karolina Peter, AT and Elif Kursun, CH	<b>Chairs:</b> Claudia Schwerz, SE and Patrícia Rodrigues, PT
10:30	A24-ID74 <b>Mónica Loureiro</b>	D5 J.M. Ribeiro	C17 - ID166 Belhaddad Oualid
	Advances in isocyanate	Development of TiO2:Nb	Study of interfacial
	microencapsulation for	thin films for transparent	interactions between a
	new ecological and	thermoelectric modules	gold layer and indium
	mono-component		bumps for photonic
	adhesives		packaging applications
	Universidade de Lisboa, Portugal	University of Minho, Portugal	CEA, LETI, France
10:45	A25-ID91	D6 - ID129	C18 – ID117
	Paola Rizzi	Karolina Peter	Patrícia Rodrigues
	Nanoporous Gold	"Zooming inside spider	Integration of NiTi crack
	synthesis from	silk" - Using synchrotron	sensors in aluminum
	metastable Au33Fe67	nanoXRD to compare the	alloys by material
	alloy for Surface	ultrastructure of spider	extrusion (MEX)
	Enhanced Raman	silks	
	Spectroscopy applications		
	University of Torino, Italy	University of Natural Resources and Life Sciences, Austria	University of Coimbra, Portugal
11:00	Coffee break		

11:30	A26-ID127	D7 - ID37	C19 - ID32
11.50	Alexander Dallinger	Marco Alberto	Claudia Schwerz
	Tunable wettability of	Impact of the RbF	In-situ detection of
	laser-induced graphene	treatment in high	defects generated by
	through processing	bandgap ACIGS based	spatter in laser powder
	environment or	solar cells	bed fusion
	processing parameters	Solar cells	bed rusion
	processing parameters		
	Graz University of Technology,	International Iberian	Chalmers University of
	Austria	Nanotechnology Laboratory,	Technology, Sweden
		Portugal	
11:45	A27-ID111	D8 – ID47	C20 - ID89
	Kirti Tiwari	Andrea Szabóová	Ana González
	Dealloying a Ti-Cu based	Investigation of the	Multiscale
	Amorphous Alloy for	dynamics of deformation	characterisation of
	Enhancing its	mechanisms in Mg-Gd	maraging steel
	Antimicrobial Properties	alloys using in-situ	microstructure obtained
	for Biomedical Implant	experimental methods	by laser powder bed
	Application		fusion
	Università degli Ctudi di Terine	Charles University Creshia	National Centre for
	Università degli Studi di Torino, Italy	Charles University, Czechia	Metallurgical Research, Spain
12:00	A28-ID96	D9 – ID73	C21 - ID138
	Aleksandra Bartkowska	Elif Kursun	Katharina Gabrysiak
	Engineered porous FeMn	Characterization of Strain	Correlation between
	alloys with addition of Ag	Localizations Under Cyclic	process parameters,
	as antibacterial element	Loading through Multi-	microstructure and
	for biodegradable implant	Scale Digital Image	properties of Al <sub>92</sub> Mn <sub>6</sub> Ce <sub>2</sub>
	applications	Correlation Study	processed by laser
		,	powder bed fusion
	Autonomous University of	Paul Scherrer Institute,	Leibniz Institute for Solid State
	Barcelona, Spain	Switzerland	and Materials Research
_	122.12		Dresden, Germany
12:15	A29-ID8	D10 - ID88	C22 – ID157
	Ludovico Alberta	Michael White	Kostas Andritsos
	Effect of bactericidal	Generating Synthetic	Laser printed and sintered
	agents Ga and Cu on	Image Data for Titanium	Ag nanoparticle metal-
	structural and mechanical	Alloys via Generative	grids as bottom electrode
	properties of beta-TiNb	Adversarial Networks and	for ITO-free organic
	alloys	Variational Autoencoders	photovoltaics
	Institute for Complex	University of Manchester,	National Technical University
	Materials, IFW Dresden,	United Kingdom	of Athens, Greece
	Germany		

12:30	A30-ID210	D11 – ID98	C23 – ID10
12:30	Catarina Rebelo	Silvia Guerra Rodríguez	Vasileios Efstratiadis
		TEM in-situ straining	
	Antimicrobial porous Ta <sub>2</sub> O <sub>5</sub> surfaces with Zinc	experiments applied to	Isolation, Recovery, Recycle of Critical Metals and Rare
		· · · · · · · · · · · · · · · · · · ·	Earth Elements from Waste
	nanoparticles deposited	investigate localized	
	by magnetron sputtering	deformation in irradiated	Electric and Electronic
		stainless steels	Equipment and their
			Reusability in Additive
			Manufacturing applications
	University of Minho, Portugal	Center for Energy,	Aristotle University of
		Environmental and	Thessaloniki, Greece
12.45		Technological Research, Spain D12 – ID136	
12:45		Sakina Zaman	
		Modelling Environmentally	
		Assisted Cracking in Ni-	
		based Superalloys	
		University of Manchester,	
		United Kingdom	
13:00	Location: Mechanical Enginee  Lunch Break	ring Department	
14:30	Main Auditorium		
14.50	Chair: Prof. Anna Zervaki, GF	3	
		•	
	Keynote session		
	Prof. Damien Voiry, Univer	sity of Montpellier, France	
		catalysts for improving the el	lectrochemical conversion
	of CO <sub>2</sub> to multicarbon prod		
15:00	End of Keynote lecture		
NS	Auditorium A	Auditorium B	Auditorium C
Parallel Sessions	Structural Materials	Characterization and	Processing technologies
Ses		modeling	
<u>e</u>	Chairs: Annalisa Fortini, IT	Chairs: Chil Charlélie, FR	Chairs: Alec Saville, USA
ra	and Alexandros	and Yannick Fortouna, GR	and Evgenia Dimitriou, GR
Pa		and rainfick rolloulia, GK	
	Prospathopoulos, GR B21 – ID103	D13 - ID23	C24 - ID39
15:15	Sophie Drescher	Yen Fred Woguem	Alec Saville
	Solid solution	Classical And Ab-Initio	Microstructural Control in
	strengthening in single-	Atomistic Simulations Of 53	Additive Manufacturing of
		_	_
	phase HEAs based on Au-	[1-10](11-2) Incoherent Twin	Titanium Alloys
	Cu-Ni-Pd-Pt	Boundaries In Gold:	
		Structure, Interactions	
	IFW Dresden, Germany	University of Poitiers, France	Colorado School of Mines,
			United States of America

15:30	B22 - ID61	D14 - ID124	C25 - ID76
15:30	Andrés Soraluce	Chil Charlélie	Cindy Morales
			WC-Co additive
	Fatigue cracking initiation	Elastic buckling of	
	and propagation	graphene: a molecular	manufactured depositions
	mechanisms in quenching	static and DFT study	on a HSS 390 steel
	and partitioning (Q&P)		substrate: a microstructural
	treated stainless steels		investigation
	IMDEA Materials Institute, Spain	Université de Poitiers, France	University of Ferrara, Italy
15:45	B23 – ID78	D15 - ID42	C26 - ID9
	Annalisa Fortini	Simon Gramatte	Evgenia Dimitriou
	Solid particle erosion	Atomistic simulations of	Preparation of
	resistance of a high-	surface-induced	Superconcentrated Silver
	chromium Fe-Cr-C	amorphization kinetics in	and Copper Oxide
	hardfacing alloy: the role of	γ-Alumina	Nanoparticle Inks for LIFT-
	microstructure and particle	nanoparticles	Printing of Electronics
	size	·	
	University of Ferrara, Italy	Advanced Materials and	Aristotle University of
		Surfaces, Empa, Switzerland	Thessaloniki, Greece
16:00	B24 - ID105	D16 - ID122	C27 - ID170
	Alexandros	Müller Lorris	Alnto Koualiarella
	Prospathopoulos		
	Examining the role of	Atomistic assessment of	Tuning the shape memory
	environmental factors	copper melting point	polymer properties
	and grain orientation in	depression in	through 3D printing
	fatigue life of aluminum	confinement with AIN	strategy: An experimental
	alloy 7075		study
	Aristotle University of	Laboratory for Advanced	Aristotle University of
	Thessaloniki, Greece	Materials Processing, Empa, Switzerland	Thessaloniki, Greece
16:15	B25 - ID57	D17 - ID99	C28 - ID217
10.13	Veronika Kočiščáková	Yannick Fortouna	Panagiotis Karakaidos
	The influence of	β-TiNb in presence of	Parametric Study of Jet
	molybdenum content on	antibacterial Ga and Cu by	Droplet Formation Process
	1	ab initio calculations	•
	phase transformations in	ab illitio calculations	during LIFT Printing of
	binary Ti-Mo alloys		Living Cell Laden Bioink
	Charles University, Czechia	University of Ioannina, Greece	National Technical University of Athens, Greece
16:30	End of parallel sessions		
16:45 Main Auditorium			
	DEBATE: "What next for m	aterials ?" Prof. Heiri Hofmann-Amtenbrin	ik & Prof Gerhard Schneider
10.15		Troi. Henrilonnann-Amtenbill	ik & Froi. Gernaru Julilleluel
18:15	Main Auditorium		
	Closing Session		