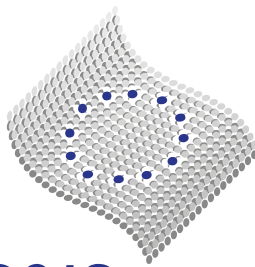


ecnf 2016



Bizkaia Aretoa
UPV/EHU,
Bilbao, Spain.
19th - 21st
October 2016

EUROPEAN
CONFERENCE
ON NANOFILMS

ecnf2016.org

19th OCTOBER

08.30 - 09.00	Registration
09.00 - 09.15	Welcome and opening
09.15 - 09.30	Political contribution
09.30 - 10.10 Plenary session	Plasma processes for functional coatings Technology and recent applications Wolfgang DIEHL - MITXELENA ROOM
10.10 - 10.30	Coffee break

BAROJA ROOM	PROTECTIVE AND TRIBOLOGICAL COATINGS
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10:30-11:00	Atomic layer deposition for modification of surface properties Emma SALMI , Kari HÄRKÖNEN BENEQ OY
11:00-11:30	Development thin ceramic-graphene based coatings in roll-to-roll mode for corrosion protection of low carbon steels M ^o Fe MENÉNDEZ , Ana MARTÍNEZ , Pascal SANCHEZ FUNDACIÓN ITMA
11:30-12:00	Characterization of functional and decorative Au and NiP coatings Pascal SCHWENDIMANN HELMUT FISCHER, AG
12:00-12:30	Electrical insulation and breakdown properties of SiO₂ and Al₂O₃ thin multilayer films deposited on stainless steel by physical vapor deposition Aritz JUARROS IK4-TEKNIKER
12:30-13:00	Tribological properties of ZnO and ZnO:Al thin films grown by Atomic Layer Deposition Rafal PIETRUSZKA , Bartłomiej S. WITKOWSKI , Marek GODLEWSKI , Slawomir ZIMOWSKI , Tomasz STAPINSKI , Jacek GRABARCZYK INSTITUTE OF PHYSICS, POLISH ACADEMY OF SCIENCES, AGH UNIVERSITY OF SCIENCE AND TECHNOLOGY, LODZ UNIVERSITY OF TECHNOLOGY

MITXELENA ROOM	NOVEL 2D MATERIALS: SYNTHESIS, CHARACTERIZATION AND APPLICATIONS
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10:30-11:00	Self-assembly of graphene nanoblister sealed to a bare metal surface Paolo LACOVIG , Rosanna LARCIPRETE , Stefano COLONNA , Fabio RONCI , Roberto FLAMMINI , Nicoleta APOSTOL , Antonio POLITANO , Peter FEULNER , Dietrich MENZEL , Silvano LIZZIT ELETTRA - SINCROTRONE TRIESTE, CNR-ISC ISTITUTO DEI SISTEMI COMPLESSI, CNR-ISM ISTITUTO DI STRUTTURA DELLA MATERIA, NATIONAL INSTITUTE OF MATERIALS PHYSICS, DEPARTMENT OF PHYSICS, UNIVERSITY OF CALABRIA, PHYSIKDEPARTMENT E20, TECHNISCHE UNIVERSITÄT MÜNCHEN
11:00-11:30	Synthesis of organometallic sandwich complexes and nanowires on graphene Felix HUTTMANN , Nicolas SCHLEHECK , Merve SECKIN , Thomas MICHEL UNIVERSITÄT ZU KÖLN, AS BEFORE
11:30-12:00	Contact resistance of 1D metal-graphene interfaces Bernhard KRETZ , Christian SØNDERGAARD PEDERSEN , Daniele STRADI , Mads BRANDBYGE , Aran GARCIA LEKUE DONOSTIA INTERNATIONAL PHYSICS CENTER (DIPC), CENTER FOR NANOSTRUCTURED GRAPHENE, DEPARTMENT OF MICRO- AND NANOTECHNOLOGY, TECHNICAL UNIVERSITY OF DENMARK
12:00-12:30	Mechanical properties of fluctuating graphene Cristina GOMEZ-NAVARRO , Guillermo LOPEZ-POLIN , Julio GOMEZ HERRERO UNIVERSIDAD AUTONOMA DE MADRID
12:30-13:00	Atomic-scale control of graphene magnetism using hydrogen atoms Ivan BRIHUEGA UNIVERSIDAD AUTONOMA DE MADRID

ARRIAGA ROOM	THIN FILMS FOR ENERGY CONVERSION, CATALYSIS AND RELATED PROCESSES
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10:30-11:00	Magnetron sputtering as a versatile tool to fabricate catalytic coatings on porous substrates for renewable hydrogen technology Asunción FERNÁNDEZ CAMACHO , Mariana PALADINI , Francesco GIARRATANO , Vanda GODINHO , Gisela M. ARZAC , Dirk HUFSCHMIDT , M. Carmen JIMÉNEZ DE HARO , Ana M. BELTRÁN , Olga MONTES INSTITUTO DE CIENCIA DE MATERIALES DE SEVILLA (CSIC-UNIV.SEVILLA)
11:00-11:30	PHOTOCATALYTIC COATING DEVELOPMENT Yolanda DE MIGUEL , JOSÉ ANTONIO IBÁÑEZ , GEMMA BERRIOZABAL TECNALIA
11:30-12:00	On the fabrication of a SnO₂-doped metal-organic framework for applications in photocatalysis Joshua MEHTA , Tian TIAN , David FAIREN JIMENEZ , Andrew WHEATLEY UNIVERSITY OF CAMBRIDGE
12:00-12:30	Copper-Nickel Nanowires For Transparent Conductive Electrodes Quentin LONNE , John Mwangi KAMAU , Jose ENDRINO , Zhaorong HUANG CRANFIELD UNIVERSITY
12:30-13:00	Anchoring of hybrid polyoxometalates on tailored polymeric surfaces Jagoba MARTIN-CABALLERO , Saioa AGUADO , Leire RUIZ , Beñat ARTETXE , Juan M GUTIERREZ-ZORRILLA , Jose Luis VILAS BCMATERIALS, UNIVERSIDAD DEL PAÍS VASCO (UPV/EHU)

13.00 - 14.00	Lunch
14.00 - 18.00	MATCH Session (Barandiaran Room)
14.00 - 14.40 Plenary session	2D dichalcogenide electronic materials and devices Andras KIS - MITXELENA ROOM

BAROJA ROOM	PROTECTIVE AND TRIBOLOGICAL COATINGS
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14:40-15:10	THE INFLUENCE OF HUMIDITY ON THE TRIBOLOGICAL PERFORMANCE OF CHROMIUM CARBIDE COATINGS. RAMAN CHARACTERIZATION. Arturo LOUSA RODRÍGUEZ, D. CANO -, J. ESTEVE - UNIVERSIDAT DE BARCELONA
15:10-15:40	Adhesion enhancement of DLC hard coatings by HiPIMS metal ion etching pre-treatment and its tribological properties José Antonio SANTIAGO VARELA, Iván FERNÁNDEZ , Ambjørn WENNBERG , Raquel GONZÁLEZ ARRABAL, Antonio RIVERA , Jon MOLINA , Miguel MONCLÚS IMDEA MATERIALES , NANO4ENERGY , INSTITUTO DE FUSIÓN NUCLEAR
15:40-16:10	Evaluation of protective coatings on marine composites Heather O' CONNOR , Denis DOWLING UNIVERSITY COLLEGE DUBLIN
16:10-16:40	A study of the properties of CrN-Ag coatings for orthopaedic applications Laurent ESPITALIER , Jonathan HOUSDEN , Sarah BANFIELD WALLWORK CAMBRIDGE
16:40-17:10	Tribological Study of Different Surface Technologies for Improved Release, Friction and Wear in Plastic Injection Moulding Borja ZABALA , E. FUENTES , X. FERNÁNDEZ , Francesco PAGANO , María OÑA , LP NIELSEN IK4-TEKNIKER , PROINYEC , DTI

MITXELENA ROOM	NOVEL 2D MATERIALS: SYNTHESIS, CHARACTERIZATION AND APPLICATIONS
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14:40-15:10	Band offsets of transferred WSe2 flakes on graphene probed at the nanoscale Pierre MALLET , Vladimir CERCHEZ , Jean-Yves VEUILLEN , Karol NOGAJEWSKI , Marek POTEMSKI INSTITUT NEEL , CNRS-UGA , LABORATOIRE NATIONAL DES CHAMPS MAGNETIQUES INTENSES , CNRS-UGA
15:10-15:40	Local Strain Engineering in 2D Materials Rafael ROLDAN INSTITUTO DE CIENCIA DE MATERIALES DE MADRID ICMM-CSIC
15:40-16:10	Anisotropic properties of MoS2 layers grown on nanopatterned template Christian MARTELLA, Carlo MENNUNCI, Eugenio CINQUANTA, Alessio LAMPERTI, Francesco BUATIER DE MONGEOT, Alessandro MOLLE LABORATORIO MDM , IMM-CNR , DIPARTIMENTO DI FISICA , UNIVERSITÀ DI GENOVA
16:10-16:40	Isolation of Highly Stable Antimonene under Ambient Conditions Pablo ARES , David RODRIGUEZ SAN-MIGUEL, Diego A. ALDAVE , Julio GOMEZ HERRERO, Felix ZAMORA DEPARTAMENTO DE FÍSICA DE LA MATERIA CONDENSADA ; UNIVERSIDAD AUTÓNOMA DE MADRID , DEPARTAMENTO DE QUÍMICA INORGÁNICA ; UNIVERSIDAD AUTÓNOMA DE MADRID
16:40-17:10	Tuning the Graphene on Ir(111) adsorption regime by Fe/Ir surface alloying Jens BREDE , Jagoda SLAWINSKA , Mikel ABADIA , Celia ROGERO , J. Enrique ORTEGA , Ignacio PIQUERO-ZULAICA, Jorge LOCO-CHECA , Andrés ARANAU , Jorge IRIBAS CERDÁ CENTRO DE FÍSICA DE MATERIALES CFM-MPC , INSTITUTO DE CIENCIA DE MATERIALES DE MADRID , ICMM-CSIC , INSTITUTO DE CIENCIA DE MATERIALES DE ARAGÓN- ICMA

ARRIAGA ROOM	FROM MOLECULES AND NANOPARTICLES TO NANOSTRUCTURED THIN FILMS
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14:40-15:10	Molecular Dynamics for Irradiation Driven Chemistry: Application to the Focused Electron Beam Induced Deposition Andrey V. SOLOVYOV , Gennady SUSHKO , Iliia SOLOVYOV MBN RESEARCH CENTER
15:10-15:40	Combination of phase-shifting interferometry and ellipsometry for absorbing nanofilm thickness measurement Karl FLEURY-FRENETTE CENTRE SPATIAL DE LIÈGE , STAR , UNIVERSITÉ DE LIÈGE
15:40-16:10	Nanodiscs fabrication by self-assembled templates Maite GOIRIENA-GOIKOETXEA , Andrey SVALOV , Jorge FEUCHTWANGER , Alfredo GARCIA-ARRIBAS BASQUE CENTER FOR MATERIALS, APPLICATIONS AND NANOSTRUCTURES , BCMATERIALS , UNIVERSIDAD DEL PAÍS VASCO (UPV/EHU)
16:10-16:40	Buckling of thin films on substrates Durinck JULIEN , Colin JÉRÔME , Coupeau CHRISTOPHE , Ruffini ANTOINE , Hamade SAMI , Parry GUILLAUME , Cimetière ALAIN , Grilhé JEAN INSTITUT P' , LABORATOIRE D'ETUDES DES MICROSTRUCTURES , SIMAP

17.10 - 17.50 Plenary session	Nanocolumnar coatings for implants with antibacterial properties José Miguel GARCÍA MARTÍN - MITXELENA ROOM
17.50	Closure of the first day

20th OCTOBER

08.50 - 09.30 Plenary session	Production of unimodal size distribution nanoparticles by low pressure plasma Stéphane LUCAS - MITXELENA ROOM
09.30 - 10.10 Plenary session	Technological Developments in Coatings for Components and Cutting Tools Roel TIETEMA - MITXELENA ROOM
10.10 - 10.30	Coffee break

BAROJA ROOM	THIN FILMS FOR ENERGY CONVERSION, CATALYSIS AND RELATED PROCESSES
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10:30-11:00	AZO protected by TiO2 layers grown by magnetron sputtering as transparent electrodes for viologen electrochromic devices Eva GUTIERREZ BERASATEGUI, Cristina ZUBIZARRETA, Javier BARRIGA IK4-TEKNIKER
11:00-11:30	SnOx transparent conductive films prepared by reactive sputtering at room temperature Cecilia GUILLÉN, José HERRERO DEPARTAMENTO DE ENERGÍA-CIEMAT
11:30-12:00	Transparent conductive IZO films deposited by reactive sputtering from metallic targets Ivan FERNANDEZ, Ovidio PEÑA, Victor BELLIDO, Raquel GONZALEZ NANO4ENERGY SLNE, INSITUTO DE FUSIÓN NUCLEAR ETSIH-UPM, GENCOA LTD
12:00-12:30	The effect of the magnetron sputtering parameters on the properties of IGZO thin films. Daniel SOLÍS CORTÉS, Elena NAVARRETE ASTORGA, María Cruz LÓPEZ ESCALANTE, Enrique A. DALCHIELE, Dietmar LEINEN, Francisco MARTÍN, José Ramón RAMOS BARRADO UNIVERSIDAD DE MÁLAGA, INSTITUTO DE FÍSICA & CINQUIFIMA, FACULTAD DE INGENIERÍA
12:30-13:00	Magnetron sputtered Co, Co-C, Co-B thin films as catalysts for hydrogen generation applications. Durability and deactivation mechanism. Mariana PALADINI SAN MARTÍN, Gisela Mariana ARZAC, Vanda GODINHO, Asunción FERNÁNDEZ CAMACHO, M ^o Carmen JIMÉNEZ DE HARO, Dirk HUFSCHEMIDT, Ana BELTRÁN CIC-CARTUJA ICMSE-CSIC

MITXELENA ROOM	NOVEL 2D MATERIALS: SYNTHESIS, CHARACTERIZATION AND APPLICATIONS
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10:30-11:00	Chiral charge and orbital order Jasper VAN WEZEL, Ana SILVA, Shan ZHU UNIVERSITY OF AMSTERDAM
11:00-11:30	Charge density wave order in 1D mirror twin boundaries of single-layer MoSe2 Sara BARJA, Sebastian WICKENBURG, Zhen-Fei LIU, Yi ZHANG, Hyejin RYU, Miguel M. UGEDA, Zahid HUSSAIN, Zhi-Xun SHEN, Sung-Kwan MO, Ed WONG, Miquel B. SALMERON, Feng WANG, Michael F. CROMMIE, D. Frank OGLETREE, Jeffrey B. NEATON, Alexander WEBER-BARGIONI MOLECULAR FOUNDRY, LAWRENCE BERKELEY NATIONAL LABORATORY, ADVANCED LIGHT SOURCE, LAWRENCE BERKELEY NATIONAL LABORATORY, CIC NANOGUNE, STANFORD INSTITUTE OF MATERIALS AND ENERGY SCIENCES, SLAC NATIONAL ACCELERATOR LABORATORY, MATERIALS SCIENCES DIVISION, LAWRENCE BERKELEY NATIONAL LABORATORY, DEPARTMENT OF PHYSICS, UNIVERSITY OF CALIFORNIA AT BERKELEY
11:30-12:00	Charge order from orbital-dependent coupling evidenced by NbSe2 Jasper VAN WEZEL, Felix FLICKER UNIVERSITY OF AMSTERDAM, UNIVERSITY OF CALIFORNIA AT BERKELEY
12:00-12:30	Signature of topological superconductivity in the Meissner state Luca CHIROLLI FUNDACION IMDEA NANOCIENCIA
12:30-13:00	Chiral charge density wave in TiSe2 Shan ZHU, Jasper WEZEL VAN UNIVERSITY OF AMSTERDAM

AXULAR ROOM	FROM MOLECULES AND NANOPARTICLES TO NANOSTRUCTURED THIN FILMS
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10:30-11:00	The Effect of a Sputtered Al-Doped ZnO Seed Layer on the Morphological, Structural and Optical Properties of Electrochemically Grown ZnO Nanorod Arrays Elena NAVARRETE, Lucía CAMPO, Daniel SOLÍS, María Cruz LÓPEZ, Enrique A. DALCHIELE, Francisco MARTÍN, José R. RAMOS-BARRADO LABORATORIO DE MATERIALES Y SUPERFICIE (UNIDAD ASOCIADA AL CSIC), DEPARTAMENTOS DE FÍSICA APLICADA & INGENIERÍA QUÍMICA, UNIVERSIDAD DE MÁLAGA, INSTITUTO DE FÍSICA & CINQUIFIMA, FACULTAD DE INGENIERÍA
11:00-11:30	Study of the influencing parameters on the synthesis of nanoparticles by a gas aggregation source attached to a semi-industrial PVD machine Néstor BOLAÑOS RODRÍGUEZ, Eva GUTIERREZ BERASATEGUI, Lucía MENDIZABAL, Javier BARRIGA IK4-TEKNIKER

AXULAR ROOM	FROM MOLECULES AND NANOPARTICLES TO NANOSTRUCTURED THIN FILMS
11:30-12:00	Growth and characterization of MoSe₂ nanolayers Carolina ALMEIDA MARQUES, Ana S. VIANA, Luis F. SANTOS, António J. SILVESTRE, Olinda CONDE DEPARTAMENTO DE FÍSICA, FACULDADE DE CIÊNCIAS E CEFEMA, UNIVERSIDADE DE LISBOA, CENTRO DE QUÍMICA E BIOQUÍMICA, FACULDADE DE CIÊNCIAS, UNIVERSIDADE DE LISBOA, CENTRO DE QUÍMICA ESTRUTURAL E DEPARTAMENTO DE ENGENHARIA QUÍMICA, INSTITUTO SUPERIOR TÉCNICO, UNIVERSIDADE DE LISBOA, ÁREA DEPARTAMENTAL DE FÍSICA, INSTITUTO SUPERIOR DE ENGENHARIA DE LISBOA
12:00-12:30	A custom quadrupole setup for ion energy and ion mass selective hyperthermal ion beam assisted deposition of nitride nanofilms Philipp SCHUMACHER, Michael MENSING, Jürgen W. GERLACH, Stephan RAUSCHENBACH, Bernd RAUSCHENBACH LEIBNIZ-INSTITUT FÜR OBERFLÄCHENMODIFIZIERUNG, MAX-PLANCK-INSTITUT FÜR FESTKÖRPERFORSCHUNG
12:30-13:00	Optofluidic modulation of polarization active thin films and multilayers prepared by PVD Oliva-ramirez MANUEL, Barranco ANGEL, Yubero FRANCISCO, Agustin R. GONZALEZ-ELIPE INSTITUTO DE CIENCIA DE MATERIALES DE SEVILLA (CSIC-UNIV. SEVILLE)
13.00 - 14.00	Lunch
14.00 - 14.40 Plenary session	Stress Generation, Deformation and Fracture of Thin Films on Compliant Substrates Steve BULL - MITXELENA ROOM

AXULAR ROOM	PROTECTIVE AND TRIBOLOGICAL COATINGS
14:40-15:10	Tribocorrosion response of different multilayer TaN coatings in biological environments Raquel BAYON, Lucía MENDIZABAL IK4-TEKNIKER
15:10-15:40	Black DLC sputtering from graphite and transparent PTFE-like coatings by RF magnetron sputtering of polymer target Young Sik SONG, Sung Chul LIM, Jong Ryoul KIM KITECH, HANYANG UNIVERSITY
15:40-16:10	Investigation of wear behaviour in multi-layered Ti/MoS₂ coated mill inserts for aluminium alloys milling Tomasz BRZEZINKA, Jeff RAO, German FOX RABINOVICH, M. CHOWDHURY, Stephen VELDHIJS, Joern KOHLSCHIEHN, Jose Luis ENDRINO ARMENTEROS SCHOOL OF AEROSPACE, TRANSPORT AND MANUFACTURING, CRANFIELD UNIVERSITY, DEPARTMENT OF MECHANICAL ENGINEERING, MCMMASTER UNIVERSITY, KENNAMETAL SHARED SERVICES GMBH
16:10-16:40	Surface modification of biomaterials using a new plasma-assisted ion implantation technique Jaume CARO, Raül BONET, Daniel CASELLAS, Josep BASSAS, Sílvia MOLAS FUNDACIÓ CTM CENTRE TECNOLÒGIC, CENTRES CIENTÍFICS I TECNOLÒGICS CCITUB, UNIVERSITAT DE BARCELONA

MITXELENA ROOM	NOVEL 2D MATERIALS: SYNTHESIS, CHARACTERIZATION AND APPLICATIONS
14:40-15:10	Electronic and vibrational properties of alkali metal functionalized layered materials Alexander GRÜNEIS UNIVERSITY OF COLOGNE
15:10-15:40	Improving the thermal stability of transition metal nanoclusters adsorbed on graphene Antonio Javier MARTÍNEZ GALERA, Ulrike A. SCHRÖDER, Charlotte HERBIG, Mohammad A ARMAN, Jan KNUDSEN, Thomas MICHELY UNIVERSITÄT ZU KÖLN, DIVISION OF SYNCHROTRON RADIATION RESEARCH AND LUND UNIVERSITY
15:40-16:10	ELECTRON ENERGY DISPERSION OF PRISTINE AND ALKALI-METAL DOPED black phosphorous: a combined ARPES and tight-binding study Niels EHLEN, Boris SENKOVSKIY, Luca PETACCIA, Alexander FEDOROV, Paola DI PIETRO, Andrea PERUCCI, Gianni PROFETA, Antonio SANNA, Alexander GRÜNEIS UNIVERSITY OF COLOGNE, ELETTA - SINCROTRONE TRIESTE, UNIVERSITY OF LAQUILA, MAX PLANCK INSTITUTE OF MICROSTRUCTURE PHYSICS
16:10-16:40	Quasiparticle renormalization in lithium doped graphene nanoribbons Boris SENKOVSKIY, Danny HABERER, Alexander FEDOROV, Konstantin A. SIMONOV, Alexei B. PREOBRAJENSKI, Nicolae ATODIRESEI, Vasile CACIUC, Achim ROSCH, Felix R. FISCHER, Alexander GRÜNEIS UNIVERSITY OF COLOGNE, UNIVERSITY OF CALIFORNIA AT BERKELEY, MAX-LAB, LUND UNIVERSITY, PETER GRÜNBERG INSTITUTE AND INSTITUTE FOR ADVANCED SIMULATION
16:40-17:10	Oxygen intercalation under epitaxial graphene on Ni(111) Luca BIGNARDI, Paolo LACOVIG, Matteo DALMIGLIO, Aliakbar GHAFARI, Luca PETACCIA, Fabrizio ORLANDO, Alessandro BARALDI, Rosanna LARCIPIRETE, Silvano LIZZIT ELETTA - SINCROTRONE TRIESTE, HELMHOLTZ-ZENTRUM BERLIN, PAUL SCHERRER INSTITUT, ISTITUTO DEI SISTEMI COMPLESSI - CNR

BAROJA ROOM	THIN FILMS FOR ENERGY CONVERSION, CATALYSIS AND RELATED PROCESSES
14:40-15:10	Simple photovoltaic cells based on ZnO nanorods and oxide films Bartłomiej WITKOWSKI , Rafal PIETRUSZKA , Lukasz WACHNICKI , Sylwia GIERALTOWSKA , Marek GODLEWSKI INSTITUTE OF PHYSICS, POLISH ACADEMY OF SCIENCES
15:10-15:40	How to use commercial steels for direct solar application? A smart solution based on SiOx sol-gel Pascal SANCHEZ , M ^o Fe MENÉNDEZ , Luis J. ANDRÉS , David GÓMEZ FUNDACIÓN ITMA
15:40-16:10	Raman scattering advanced assessment of nanometric layers for high efficiency chalcogenide solar cells Alejandro PEREZ-RODRIGUEZ , Maxim GUC , Florian OLIVA , Lorenzo CALVO-BARRIO , Tariq JAWHARI , Edgardo SAUCEDO , Victor IZQUIERDO-ROCA IREC: CATALONIA INSTITUTE FOR ENERGY RESEARCH, CENTRES CIENTÍFICS I TECNOLÒGICS CCITUB, UNIVERSITAT DE BARCELONA
16:10-16:40	Green solvent-processable ink formulations for organic solar cells Laura MOLINA PEREZ , Llorenç BASTISTA PÉREZ , Ana MILENA CRUZ , Mónica DELLA , David GUTIÉRREZ TAUSTE LEITAT TECHNOLOGICAL CENTER
16:40-17:10	Cu₂MnSnS₄ thin films for a sustainable PV development Stefano MARCHIONNA , Alessia LE DONNE , Maurizio ACCIARRI , Simona BINETTI , Federico CERNUSCHI , Marco MERLINI RSE RICERCA SUL SISTEMA ENERGETICO SPA, UNIVERSITY OF MILANO-BICOCCA, DEPT. OF MATERIALS SCIENCE AND MIBSOLAR CENTER, UNIVERSITY OF MILAN , EARTH SCIENCE DEPARTMENT
17.10	Closure of the second day
20.00	Official dinner

21st OCTOBER

09.00 - 09.40 Plenary session	New materials for all-solid-state thin film Li and Li-ion batteries Brigitte PECQUENARD - MITXELENA ROOM
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ARRIAGA ROOM	FROM MOLECULES AND NANOPARTICLES TO NANOSTRUCTURED THIN FILMS
09:40-10:10	Metallic nanostructures prepared by glancing angle deposition Susann LIEDTKE , Christoph GRÜNER , Michael MENSING , Jürgen W. GERLACH , Bernd RAUSCHENBACH LEIBNIZ INSTITUTE OF SURFACE MODIFICATION
10:10-10:40	Functionalized Titanium oxide nanotubes for drug delivery Ana CONDE DEL CAMPO, Antonio L. DOADRIO , John J. AGUILERA , Juan J. DE DAMBORENEA GONZÁLEZ, Jaime ESTEBAN , Miguel MARÍN SÁNCHEZ, María MARIA VALLET-REGÍ , María de los Ángeles ARENAS VARA CENTRO NACIONAL DE INVESTIGACIONES METALÚRGICAS (CENIM-CSIC), DEPARTAMENTO DE QUÍMICA INORGÁNICA Y BIOINORGÁNICA , DEPARTAMENTO DE CLINICAL MICROBIOLOGY. IIS-FUNDACIÓN JIMÉNEZ DÍAZ, UAM. , DEPARTAMENTO DE QUÍMICA INORGÁNICA Y BIOINORGÁNICA .
10:40-11:10	Nanostructured films with omniphobic and slippery properties Jesús PALENZUELA , Eneko AZACETA , Germán CABAÑERO , Hans-Jürgen GRANDE , Ramón TENA-ZAERA IK4-CIDETEC RESEARCH CENTER

MITXELENA ROOM	NOVEL 2D MATERIALS: SYNTHESIS, CHARACTERIZATION AND APPLICATIONS
09:40-10:10	Graphene and Mo(o)re! – Synthesis and device applications of novel 2D materials Satender KATARIA GRAPHENE BASED NANOTECHNOLOGY, UNIVERSITY OF SIEGEN
10:10-10:40	Atomic Layer Deposition: A powerful deposition technology of nanostructured materials Mercedes VILA JUÁREZ COATING TECHNOLOGIES S.L.-CTECHNANO
10:40-11:10	From MAX phase to MXenes: 2D anodic materials for Sodium-ion batteries Stefano MARCHIONNA , Federico CERNUSCHI , Riccardo RUFFO , Rosita CABRERA L. PENA, Marco MERLINI RSE-SPA RICERCA SUL SISTEMA ENERGETICO, UNIVERSITY OF MILANO-BICOCCA, DEPT. OF MATERIALS SCIENCE , UNIVERSITY OF MILANO

BAROJA ROOM	PROTECTIVE AND TRIBOLOGICAL COATINGS
09:40-10:10	<p>Experimental study and modelling of the friction and wear of thin film coated piston rings/cylinder liner Amaya IGARTUA , B. ZABALA , X. FERNÁNDEZ , M. HERNÁIZ , C. PRIESTNER , H. OFNER , M. ABRAMCZUK , P. TRIBOTTE , F. GIROT , E. ROMAN , R. NEVSHUPA IK4-TEKNIKER, AVL LIST GMBH, RENAULT, DIRECTION DE LA RECHERCHE, DES ETUDES AVANCÉES ET DES MATÉRIAUX. SCE 68530. FR TCR LAB 0121, 4UNIVERSITY OF THE BASQUE COUNTRY, UPV-EHU, FACULTY OF ENGINEERING, DEPARTMENT OF MECHANICAL ENGINEERING, IKERBASQUE, BASQUE FOUNDATION FOR SCIENCE, SPANISH NATIONAL RESEARCH COUNCIL, INSTITUTE OF MATERIALS SCIENCE OF MADRID, SPANISH NATIONAL RESEARCH COUNCIL, INSTITUTE «EDUARDO TORROJA» OF CONSTRUCTION SCIENCES</p>
10:10-10:40	<p>Quantification of the ejection force during injection moulding when applying different surface pretreatments, wear-resistant coatings, ion implantation and plastic types Lars Pleth NIELSEN , Bjarke HOLL CHRISTENSEN , Klaus PAGH ALMTOFT , Stefan HENGESBERGER TRIBOLOGY CENTRE, DANISH TECHNOLOGICAL INSTITUTE, HAUTE ÉCOLE D'INGENIERIE ET D'ARCHITECTURE</p>

11.10 - 11.40	Coffee break
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BAROJA ROOM	PROTECTIVE AND TRIBOLOGICAL COATINGS
11:40-12:10	<p>DLC coatings deposited by magnetron sputtering : high hardness and enhanced adhesion properties A. Wennberg, I. Fernández, J.A. Santiago, R. González-Arrabal, A. Rivera, M. Castillo, J. Molina, M. Monclús NANO4ENERGY SLNE, IMDEA MATERIALES, GENCOA LTD</p>
12:10-12:40	<p>Increasing aluminium particle incorporation in brush-electroplated nickel coatings: new insights Luis ISERN ARROM, Heather ALMOND , Sue IMPEY , Sidney CLOUSER , Jose Luis ENDRINO ARMENTEROS CRANFIELD UNIVERSITY, SIFCO ASC</p>
12:40-13:10	<p>NEW TRENDS , NEW OPPORTUNITY FOR HYBRID TECHNOLOGY: - DUPLEX COATINGS :PLASMA NITRIDING + PVD and PECVD - ARC and MAGNETRON CO DEPOSITION COATING Pierre COLLIGNON PD2I FRANCE</p>

MITXELENA ROOM	NOVEL 2D MATERIALS: SYNTHESIS, CHARACTERIZATION AND APPLICATIONS
11:40-12:10	<p>Potential barriers on 2D material devices Nieves MORQUILLAS AZPIAZU , Pablo ALONSO , Saul VELEZ , Felix CASANOVA , Luis E. HUESO , Rainer HILLENBRAND, Reyes CALVO , Jose Ignacio PASCUAL CIC NANO GUNE</p>
12:10-12:40	<p>Toward adaptive optics with single layer transition metal dichalcogenides Riccardo FRISENDA IMDEA NANOCIENCIA</p>
12:40-13:10	<p>Breaking time-reversal symmetry at the topological insulator surface by metal-organic coordination networks Mikhail OTROKOV , Evgueni V. CHULKOV , Andres ARNAU DONOSTIA INTERNATIONAL PHYSICS CENTER (DIPC)</p>

ARRIAGA ROOM	THIN FILMS FOR ENERGY CONVERSION, CATALYSIS AND RELATED PROCESSES
11:40-12:10	<p>Self-powered Solar Water Splitting Photoelectrochemical Cell combining an γ-Fe₂O₃/FeOOH Photoanode in Tandem with an Organic Solar Cell Enno GENT , Michael WARK , Manuela SCHIEK , Dereje Hailu TAFFA , Arne LÜTZEN , Matthias SCHULZ INSTITUTE OF CHEMISTRY, CHEMICAL TECHNOLOGY 1, CARL VON OSSIETZKY UNIVERSITY OLDENBURG, INSTITUTE OF PHYSICS, ENERGY AND SEMICONDUCTOR RESEARCH LABORATORY, CARL VON OSSIETZKY UNIVERSITY OLDENBURG, KEKULÉ INSTITUTE OF ORGANIC CHEMISTRY AND BIOCHEMISTRY, RHEINISCHE FRIEDRICH-WILHELMS UNIVERSITY BONN</p>
12:10-12:40	<p>Innovative coatings deposited by high power pulsed magnetron sputtering for PEM fuel cell and electrolyser bipolar plates Lucia MENDIZABAL , Sigrid LÆDRE , Ole Edvard KONGSTEIN , Anders DØEGÅRD , Javier BARRIGA IK4-TEKNIKER, SINTEF MATERIALS AND CHEMISTRY</p>
12:40-13:10	<p>Thin-film anodes for high power and high energy density Li-ion batteries Miguel Angel MUÑOZ MARQUEZ CIC ENERGIGUNE</p>

13.10	Closure of the congress
13.30	Farewell lunch



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