

## BIOCOAT 2010 PROGRAM

(Faculty of Economics, Zaragoza, June 24, 2010)

<b>MORNING</b>		
08:45	Opening session	
	<b>SESSION I: "FUNCIONALIZATION AND TEXTURE ON SURFACES"</b> Chairman : A. R. González-Elipe	
09:00	Invited conference: <i>Application of plasma technologies to biological interfaces design</i> F. Rossi European Commission Joint research Center, Italy	CI-1
09:30	<i>The role of the amine groups in the biocompatibility of polymers and DLC functionalized with plasmas</i> C. López-Santos Instituto de Ciencia de Materiales de Sevilla, CSIC-U. Sevilla, Spain	FT-1
09:45	<i>Honeycomb structured porous interfaces as templates for protein adhesion</i> J. Rodríguez-Hernández Instituto de Ciencia y Tecnología de Polímeros, Spain	FT-2
10:00	<i>Syntesis and Photocrosslinking of a biodegradable poliéster for tissue engineering applications</i> M. Lomba Instituto Ciencia de Materiales de Aragón,CSIC-U. Zaragoza, Spain	FT-3
10:15	<i>Design and rapid prototyping of fractal geometries with application in biomedical engineering</i> A. Díaz-Lantada Universidad Politécnica de Madrid, Spain	FT-4
	Coffee Break	
10:45	<b>POSTER SESION</b>	
	<b>SESSION II: "TRIBOLOGY AND CORROSION"</b> Chairman:	
11:45	Invited Conference: <i>State of the art and failure mechanisms of DLC coated articulating joint replacement</i> R. Hauert Empa, Swiss federal Laboratories for Materials Testing and Research, Switzerland	CI-2
12:15	<i>Tribological properties of silver containing amorphous carbon</i> J.C. Sánchez-López Instituto Ciencia de Materiales de Sevilla, CSIC-U. Sevilla, Spain	TC-1
12:30	<i>Tribological behavior of Ti-containing DLC nanocomposite coatings in biological enviroment</i> A. Escudeiro University of Coimbra, Portugal	TC-2
12:45	<i>Improved wear performance of ultra high molecular weight polyethylene coated with hydrogenated diamond like carbon</i> V. Martínez Universidad de Zaragoza, Spain	TC-3
13:00	<i>Tribocorrosion response of PVD-TiCN coatings on Ti6Al4V for artificial joints</i> V. Sáenz de Viteri Fundación Tekniker, Spain	TC-4
13.15	<i>Sol-gel derived nanocrystalline hydroxyapatite coatings preparation, characterization, evaluation of the bioactivity and corrosion protection behavior</i> A.A. Elhadad Centro Nacional de Investigaciones Metalúrgicas-CSIC, Spain	TC-5
13.30	<b>LUNCH: Restaurant BAHIA</b> (see map)	

<b>AFTERNOON</b>		
	<b>SESSION III: "SURFACE MODIFICATIONS OF BIOMATERIALS"</b> (Joint session with the XI National Materials Congress) Chairman: J. A. Puértolas	
16:00	Invited Conference Laser produced coatings and surface modifications for medical implants B. León Universidad de Vigo, Spain	CI-3
16:30	<i>Nuevos recubrimientos bifásicos y bioactivos de wollastonita diopsido sobre implantes metálicos mediante proyección térmica</i> M.A. Sainz Instituto de Cerámica y Vidrio-CSIC, Spain	SM-1
16:45	<i>Biofuncionalización de superficies de titanio para la mejora del proceso de osteointegración</i> P. Sevilla Universidad Politécnica de Cataluña, Spain	SM-2
17:00	<i>Funcionalización de nanotubos de carbono con ADN para aplicaciones biomédicas</i> M. González Instituto de Carboquímica-CSIC, Spain	SM-3
17:15	<i>Cultivo y diferenciación a cartílago de células madre mesenquimales sobre aleaciones de magnesio</i> J. Trinidad Universidad de Mondragón, Spain	SM-4
17:30	<i>Viabilidad del chorro de agua a lata presión como método alternativo para incrementar la rugosidad de materiales metálicos con aplicaciones biomédicas</i> M. Lieblich Centro Nacional de investigaciones Metalúrgicas-CSIC, Spain	SM-5
17:45	Coffee break- <b>POSTER SESSION</b>	
	<b>SESION IV: SURFACE-BIOLOGICAL ENVIROMENT INTERACTION</b> Chairman: E. Gómez-Barrena	
18:15	<i>Bacterial adherence to anodized titanium alloy</i> C. Pérez-Jorge IIS-Fundación Jiménez Díaz, Spain	INT-1
18:30	<i>Advanced structural characterization of biocompatible Ag-TiCN coatings</i> R. Escobar Instituto Ciencia Materiales Madrid-CSIC, Spain	INT-2
18:45	<i>Electrochemical and biomimetic calcium-phosphate coatings on metal implants: How do they affect mesenchymal stem cells proliferation and differentiation</i> E. García University College London, UK	INT-3
18:00	<i>Chemical and morphological modification of TiO<sub>2</sub>(110) surfaces and its relationship to proteina adsorption</i> I. Palacio, Spain Universidad Complutense de Madrid, Spain	INT-4
19:15	<i>The role of oxide layer of titanium surfaces on osteoblast-like cell adhesión</i> M.A. Cabrerizo-Vilchez Universidad de Granada, Spain	INT-5
19.30	Closure	



<b>POSTERS SESSION (morning 11-12 h and afternoon 17:45-18:15 h)</b>		
<i>Adhesión de polipéptidos en biomateriales</i> N. Carretero Instituto de Ciencia de Materiales de Barcelona, Spain	P-1	FT-5
<i>Improvement of the wetting properties of polypropylene substrates by photopolymerization of vinyl acetate</i> J. Balart Universidad Politécnica de Valencia, Spain	P-2	FT-6
<i>Immobilization of antibodies on lipid nanocapsules for directed drug delivery. Physico-chemical characterization</i> J.M. Peula García Universidad de Granada, Spain	P-3	FT-7
<i>Comparative evaluation of nanoparticles coated with folic acid-modified chitosan at different molar ratios</i> A. Rata-Aguilar Universidad de Granada, Spain	P-4	FT-8
<i>Enzyme immobilization on plasma-grafting modified polymeric surfaces</i> A. Cifuentes Universidad Ramón Llull, Spain	P-5	FT-9
<i>Tribological performance of DLC coatings deposited by physical and chemical techniques on UHMWPE</i> F.J. Medel Universidad de Zaragoza, Spain	P-6	TC-6
<i>Wear-corrosion resistance of DLC coatings for hard/hard joints</i> R. Bayón Fundación Tekniker, Spain	P-7	TC-7
<i>Siliconization of metallic biomaterials: a novel coating approach to enhance their biocompatibility?</i> E. Frutos CIBER-BBN Instituto de Salud Carlos III, Spain	P-8	SM-6
<i>Characterization boride biomedical grade steel</i> G. Bermúdez Instituto Politécnico Nacional, Mexico	P-9	SM-7
<i>Multi-substituted hydroxyapatite coatings obtained by excimer laser ablation</i> C Rodríguez Valencia Universidad de Vigo, Spain	P-10	SM-8
<i>Surface modification of polypropylene (PP) using atmospheric plasma treatment</i> L. Sánchez-Nacher Universidad Politécnica de Valencia, Spain	P-11	SM-9
<i>A mathematical model to study the effect of different variables on the potential distribution in damaged sol-gel coatings in biomedical applications</i> R. Montoya Centro Nacional de Investigaciones Metalúrgicas, CSIC, Spain	P-12	SM-10

<i>Impacto f DLC/DLC-F coating in the bacterial adhesión on polyethylene surfaces</i>	P-13	INT-6
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A. Terriza Instituto Ciencia de Materiales de Sevilla, CSIC-U. Sevilla, Spain		
<i>Bacterial adherente on UHMWPE doped with vitamina E: an in Vitro study</i> D. Molina Manso IIS- Fundación Jiménez Díaz, Spain	P-14	INT-7
<i>Enhanced antibacterial properties of biomedical surfaces through micrometric silver islands</i> R. Pérez Tanoira IIS-Fundación Jiménez Díaz, Spain	P-15	INT-8
<i>Evaluation of the effect of vitamin E doped UHMWPE on biofilm development and infection using an "in vivo" experimental model</i> D. Molina Manso IIS-Fundación Jiménez Díaz, Spain	P-16	INT-9
<i>Si+ ion implantation reduces the bacterial accumulation on the Ti6Al4V surface under flow</i> M.L. González-Martín Universidad de Extremadura	P-17	INT-10
<i>7-Aminoheptanoic-acid coated cobalto nanowires for medical applications</i> A.Llavota Universidad Complutense de Madrid, Spain	P-18	INT-11
<i>Surface –ATRP of pegma onto polymethyl siloxane for biomedical applications</i> F. Dourado Universade do Minho, Portugal	P-19	INT-12
<i>Tailoring surface charge of TiN thin films for biomedical applications</i> M. Manso Universidad Autónoma de Madrid	P-20	INT-13
<i>Failure analysis of a biomedical grade component</i> N. López Perruquia Instituto Politécnico Nacional, Mexico	P-21	BIO-1
<i>Computer simulation of scaffold´s degradation</i> J. Aldazabal Universidad de Navarra	P-22	BIO-2
<i>Chitosan nanocapsules: effect of chitosan molecular weight and acetylation degree</i> J.L. Ortega-Vinuesa Universidad de Granada, Spain	P-23	BIO-3