



Dunarea de Jos University of Galati - Romania
 Competences Center: Interfaces-Tribocorrosion and
 Electrochemical Systems (CC-ITES)
Babeş-Bolyai University Cluj – Napoca - Romania
 Raluca Ripan Chemistry Research Institute

COST D33

Nanoscale Electrochemical and Bioprocesses (Corrosion) at Solid-aqueous Interfaces of Industrial Materials

Final WORKSHOP

May 13th 2009 – May 15th 2009

Cluj - Napoca, ROMANIA

PROGRAMME	
Tuesday: 12 of May 2009	
	Arrivals
17h00 - 19h00	Registration
19h00	Welcome party
Wednesday: 13 of May 2009	
9h00-9h30	Welcome – Opening -Chair. Prof. Wolfgang SAND -Prof. Luminita SILAGHI DUMITRESCU: Babes Bolyai University Vice – President. -City Administration. -COST Official.
9h30-9h45	Introduction to COST D33 & Presentation of WGs Prof. Wolfgang SAND – Chairman of COST D33 Action <i>University of Duisburg Essen, Germany</i>
Chairman - Prof. Wolfgang SAND	
9h50-10h40	Plenary Lecture Prof. Brenda J. LITTLE RECENT DEVELOPMENTS IN THE STUDY OF MICROBIOLOGICALLY INFLUENCED CORROSION <u>Brenda J. Little</u> , Richard I. Ray and Jason S. Lee <i>Naval Research Laboratory, Stennis Space Center, MS 39525 USA</i>

10h40-11h00	Coffee Break
Chairman – Dr. Gabriele FERRARI	
11h00-11h30	<p>Prof. Philippe MARCUS (WG1) Adsorption of fibronectin on model surfaces of biomaterials and effect on cellular adhesion and proliferation. Vincent PAYET, Tonia DINI, Isabelle FRATEUR, Anouk GALTAYRIES, Pascale VIGNERON, Marie Danielle NAGEL, <u>Philippe MARCUS</u> <i>Laboratoire de Physico-Chimie des Surfaces, CNRS-ENSCP (UMR7045), Ecole Nationale Supérieure de Chimie de Paris – France.</i></p>
11h30-12h00	<p>Prof. Bernard TRIBOLLET (WG1) Electroacoustic miniaturized DNA-biosensor Bernard Tribollet and Jean Gamby <i>Laboratoire Interfaces et Systèmes Electrochimiques, UPR 15 du CNRS, Université Pierre et Marie Curie, Paris – France.</i></p>
12h00-12h30	<p>Dr. Georg PAPASTAVROU (WG1) Probing polysaccharide adhesion by AFM S. Tumbiolo, <u>G. Papastavrou</u> <i>University of Geneva, Sciences II, Switzerland.</i></p>
12h30-13h00	<p>Invited speaker of WG1: Dr. José L. TOCA-HERRERA Proteins and Cells at interfaces investigated by QCM-D and AFM E. Eleta, S. Moreno-Flores, M. dM. Vivanco, R. Georgieva, H. Baumler, D. Pum, U. B. Sleytr and <u>J. L. Toca-Herrera</u> <i>Biosurfaces Unit, CIC BiomaGUNE, San Sebastián, Spain.</i></p>
13h00-13h30	<p>PhD. Alina CIUBOTARIU (WG1) Combined AFM and EFM for visualization of sulphate reducing bacteria on thermosetting resin / Zn composite coatings <u>Alina Ciubotariu</u>, Lidia Benea, Wolfgang Sand <i>Dunarea de Jos, University of Galati, CC-ITES, Romania</i></p>
13h30-15h00	Lunch
15h00-16h00	<p>Management Committee (MC) Meeting -Members of MC & WG's Leaders. -COST Officials</p>
15h00-16h00	<p>Tour & Scientific Visit Workshop participants (non MC members)</p>
Chairman – Prof. Glyn MORTON	
16h00-16h30	<p>Prof. Luca OTTAVIANO (WG1) Nanopatterned XIL substrates for nano-bio applications <u>L. Ottaviano</u>, P. Zuppella, S. Prezioso, P. De Marco, S. Di Bucchianico, M.F. Giardi, D. Botti, A. Reale, and S. Santucci <i>STN lab Department of Physics & Department of Biology University of L'Aquila, Italy.</i></p>
16h30-17h00	<p>Dr. Almira RAMANAVICIENE (WG2) Electrochemical and optical methods in glucose oxidase distribution and activity research <u>Almira Ramanaviciene</u>, Asta Kausaite-Minkstimiene^a, Arunas Ramanavicius <i>Institute of Immunology of Vilnius University University, Lithuania.</i></p>

17h00-17h30	Dr. Paula COJOCARU (WG2) New innovative composite materials obtained by electrodeposition with high biocompatibility <i>Politecnico di Milano Italy.</i>
17h30-17h50	Coffee Break
Chairman – Dr. Georg PAPASTAVROU	
17h50-18h20	Prof. Paul ROUXHET (WG2) XPS analysis of stainless steel at early stages of biofilm formation: from elements to chemical functions and molecular compounds. <u>Paul G. Rouxhet</u> , Jessem Landoulsi <i>Unité de chimie des interfaces, Université catholique de Louvain, Louvain-la-Neuve, Belgium.</i>
18h20-18h50	PhD. Andrzej KUKLINSKI (WG2) Application of extracellular polymeric substances for preventing microbially influenced corrosion <u>Andrzej Kuklinski</u> , Reinhard Stadler, Wolfram Fürbeth, Wolfgang Sand <i>University Duisburg-Essen, Biofilm Centre / Aquatic Biotechnology, Germany.</i>
18h50-19h20	Prof. Geta CARAC (WG2) Effect of the Cells Attached on Stainless Steel 304 – Electrochemical and AFM study <u>Geta Cârâc</u> , Maricica Stoica, A. Ramanaviciene and A. Ramanavicius <i>Dunarea de Jos University of Galati, Romania</i>
20h00	Dinner
Thursday: 14 of May 2009	
Chairman – Prof. Lidia BENEÀ	
9h00-9h50	Plenary Lecture Prof. Ji-Dong GU OXIDATION OF AS(III) IN THE PRESENCE OF FE(II) BY ON B-MNO₂ UNDER ACIDIC CONDITIONS <u>Xu Han and Ji-Dong Gu</u> <i>Laboratory of Environmental Microbiology and Toxicology, School of Biological Science, The University of Hong Kong, Hong Kong SAR, China.</i>
9h50-10h50 9h50-10h20	Dr. Judith TELEGDI (WG2) How can nanolayers control the microbial adhesion and corrosion? <u>J. Telegdi</u> , L. Romanschki, E. Kalman <i>Department of Surface Modification and Nanostructures, Institute of Surface Science and Catalysis, Chemical Research Center, Hungarian Academy of Sciences, Hungary.</i>
10h20-10h50	Prof. Arunas RAMANAVICIUS (WG2) Application of some issues related to biocorrosion in biofuel cells <u>Arunas Ramanavicius</u> Almira Ramanaviciene <i>Vilnius University, Center of Nanotechnology and Materials Science, Lithuania.</i>
10h50-11h10	Coffee Break

Chairman – Prof. Geta CARAC	
11h10-11h40	<p>Dr. Gabriele FERRARI (WG2&WG3) Exopolysaccharide eps180 as anti-corrosive additives for coatings. <u>G. M. Ferrari</u> <i>TNO - Netherlands Organisation for Applied Scientific Research, Den Helder, Netherlands.</i></p>
11h40-12h10	<p>Prof. Glyn MORTON (WG3) An account of the antimicrobial activity of a helical peptide and an evaluation of its use as a surface coating on fabric against bacterial contamination. Sarah Dennison <u>Glyn Morton</u> <i>University of Central Lancashire Preston UK.</i></p>
12h10-12h40	<p>Dr. Ana M. GARCÍA (WG3) Bioremediation of radioactive water in nuclear power plants <u>Ana M. García</u>, Constantino Ruibal, Diego A. Moreno. <i>Universidad Politécnica de Madrid, Dep. de Ingeniería y Ciencia de los Materiales, Escuela Técnica Superior de Ingenieros Industriales.</i></p>
12h40-13h10	<p>Prof. Lisbeth RISCHEL HILBERT (WG3) Bacterial interactions with Ag-bearing surfaces: Ag-Pd coating and Ag-bearing stainless steel <u>Lisbeth Rischel Hilbert</u>, Wen-Chi Chiang, Per Møller <i>FORCE Technology, Denmark.</i></p>
13h10-13h30	<p>Dr. Cristina PREJMEREAN (WG2&WG3) Study of dental tissues/resin-based materials interface <u>C. Prejmerean</u>, M. Moldovan, M. Trif, L. Silaghi-Dumitrescu, G. Furtos, D. Prodan, C.Sarosi & S.Boboia <i>Babes Bolyai University, Raluca Ripan Chemistry Research Institute, Cluj-Napoca, Romania</i></p>
13h30-15h00	Lunch
Chairman of Posters Session – Dr. Almira RAMANAVICIENE	
15h00-16h00	<p>OUTLOOK SESSION – POSTERS. -All participants</p>
Chairman – Prof. Lisbeth RISCHEL HILBERT	
16h00-16h30	<p>Dr. Carmen SANJOSE (WG3) Biofilm in microtiter plates. What do we measure? <u>Carmen SanJose</u>, B. Orgaz, M. Martinez and J. Villanueva <i>Dpt. of Nutrition, Food Science and Technology, Veterinary Faculty, Complutense University of Madrid, Spain.</i></p>
16h30-17h00	<p>Dr. Françoise FEUGEAS (WG3) EPS180 Properties in concrete as anti-corrosion and anti-microbial reagent: a challenge? Sébastien Roux, Mohamed Miqyas, Gabriele Ferrari, <u>Françoise Feugeas</u> <i>INSA de Strasbourg, Laboratoire de Génie de la Conception EA 3938, Strasbourg France.</i></p>
17h00-17h30	<p>PhD. Fabio MUSCOLINO (WG2&WG3) Comparison of the electrochemical behavior of stainless steels in abiotic and biotic seawater. <u>F. Muscolino</u>, P.Cojocar, L. Magagnin, P.L. Cavallotti <i>Politecnico di Milano, via Mancinelli, 7 20131 Milan, Italy.</i></p>

17h30-17h40	Coffee Break
Chairman – Prof. Bernard TRIBOLLET	
17h40-18h10	<p>Prof. Lidia BENEÀ (WG1&WG3) Materials characteristics influencing biofilm formation and growth. <u>Lidia BENEÀ</u>, Alina CIUBOTARIU, Wolfgang SAND Bernard TRIBOLLET <i>Dunarea de Jos University of Galati, Competences Center Interfaces –Tribocorrosion and Electrochemical Systems (CC-ITES), 47 Domneasca St., 800008 Galati, Romania.</i></p>
18h10-18h40	<p>Prof. Dr. Magda LAKATOS-VARSÁNYI (WG2&WG3) Electrochemical studies of the titanium implants in chloride solution. Authors: <u>M. Lakatos-Varsányi</u>, C. Suba, A. Mikó, G. Szabó, T. Pozman, M. Furkó <i>Bay Zoltán Foundation, Institute for Materials Science and Technology, Budapest, Hungary</i></p>
19h00	Conference Dinner
Friday: 15 May 2009	
Chairman –Prof. Arunas RAMANAVICIUS	
9h30-9h50	<p>Plenary Lecture Prof. Pietro Luigi CAVALLOTTI Electrodeposition of nanostructured surfaces. <i>Politecnico di Milano, Italy.</i></p>
9h50-10h20	<p>PhD. Anne HEYER (WG3) Microbially influenced corrosion in shiptank environments. <u>A. Heyer</u>, F. D’Souza, G. Ferrari, J.M.C. Mol and J.H.W. de Wit <i>M2i Materials Innovation Institute, Mekelweg 2 2628 CD Delft, The Netherlands.</i></p>
10h20-10h50	<p>Dr. Gerhard F. REMMERS (WG2&WG3) COST D33 – Pro’s and Con’s, an impression of experiences from industry <i>AkzoNobel Research, Development & Innovation - Arnhem - The Netherlands</i></p>
10h50-11h10	Coffee Break
Chairman – Prof. Philippe MARCUS	
11h10-11h25	<p>COST D33 - WG1 Summary Prof. Lidia BENEÀ <i>Dunarea de Jos University of Galati – CC-ITES, Romania</i></p>
11h25-11h40	<p>COST D33 – WG2 Summary Prof. Geta CARAC <i>Dunarea de Jos University of Galati, Romania</i></p>
11h40-11h55	<p>COST D33 – WG3 Summary Dr. Gabriele FERRARI <i>TNO Industry, Netherlands</i></p>
11h55-12h10	<p>COST D33 – STSM Report Prof. Bernard TRIBOLLET <i>Laboratoire Interfaces et Systèmes Electrochimiques UPR 15 du CNRS, France</i></p>

12h10-12h30	External Expert Evaluation Prof. Brenda J. LITTLE
12h30-12h50	External Expert Evaluation Prof. Ji-Dong GU
12h50-13h10	COST DC Rapporteur Prof. Vasile PARVULESCU
13h10-13h30	Closing Remarks Prof. Wolfgang SAND
13h30-15h00	Lunch
15h00 -	Round Table. Social Program. Excursion.
Saturday: May 16, 2009 Touristic Places Visit. Departures.	

POSTERS	
Presenting Author/Affiliation	Title /Authors
P.1. Dr. Sarah DENNISON <i>University of Central Lancashire Preston UK</i>	Characterization of an antimicrobial peptide aurein 2.5 with bacterial membranes. <u>Sarah R Dennison</u> , Leslie H G Morton, Andrea J Shorrocks, Frederick Harris and David A Phoenix.
P.2. PhD. Remus MIHAILA <i>Dunarea de Jos University of Galati, CC-ITES, Metallurgy and Materials Science, Galati, Romania</i>	ZrO₂/Co new functional bio composite coatings. <u>Remus Mihaila</u> , Lidia Benea, Marilena Mardare, Paula Cojocar.
P.3. Dr Natalija GERMAN <i>Institute of Immunology of Vilnius University University, Lithuania.</i>	Catalytic effect of glucose oxidase and gold nanoparticles on biocorrosion processes <u>Natalija German</u> , Arturas Suchodolskis, Almira Ramanaviciene, Arunas Ramanavicius, Jaroslav Voronovic.
P.4. PhD. Marilena MARDARE <i>Dunarea de Jos University of Galati, Competences Center Interfaces – Tribocorrosion and Electrochemical Systems (CC-ITES), Galati, Romania.</i>	Influence of UHMWPE/Co composite coatings on biofilm formation, biocompatibility and degradation. <u>Marilena Mardare</u> , Lidia Benea, Paula Cojocar.
P.5. PhD. Simona-Florentina SORCARU <i>Dunarea de Jos University of Galati, Competences Center Interfaces – Tribocorrosion and Electrochemical Systems (CC-ITES), Galati, Romania.</i>	Nano-Composite Coatings – Functional Surfaces in Decreasing the Bacterial Adhesion - Surface Study. Lidia Benea, <u>Simona-Florentina Sorcaru</u> , Pierre Ponthiaux.
P.6. PhD. Alina CANTARAGIU <i>Dunarea de Jos University of Galati, Chemistry Department</i>	Study of TiO₂/Hydroxyapatite Stainless Steel – nanocomposite coatings at the cells adhesion <u>Alina CANTARAGIU</u> , Geta CÂRÂC, Paula COJOCARU
P.7. PhD. Maricica STOICA <i>Dunarea de Jos University of Galati, Chemistry Department</i>	Electrochemical behavior of cells adhesion on the Stainless Steel 304 in the disinfectant medium <u>Maricica STOICA</u> , Geta Cârâc, A. RAMANAVICIENE and A. RAMANAVICIUS
P.8. Dr. Asta Kausaite-MINKSTIMIENE <i>Centre of nanotechnology and material science - NanoTechnas, Vilnius University, Lithuania</i>	From biocorrosion to enzymatic biofuel cells powered by ethanol and glucose <u>A. Kausaite-Minkstimiene</u> , A. Ramanaviciene, A. Ramanavicius
P.9. Dr. Denny THIEMIG <i>Department of Physical Chemistry Dresden University of Technology, Dresden, Germany.</i>	Electrocodeposition of ZnFe/Hydroxyapatite nanocomposites <u>Denny THIEMIG</u> , Alina Cantaragiu, Geta Cârâc, Andreas Bund
P.10. Dr. Tatjana ROMASKEVIC <i>Institute of Immunology of Vilnius Department of Polymer Chemistry, Vilnius University, Lithuania.</i>	Polyurethane-gold nanoparticles bioconjugates with enhanced biostability <u>Tatjana Romaskevici</u> , Saulute Budriene, Almira Ramanaviciene
P.11. Prof. Anisoara CIOCAN <i>Dunarea de Jos University of Galati, Faculty of Metallurgy and Materials Science.</i>	Aluminium nickel alloys cladding on steel support for hard mechanical requirements used for the bearings offshore drilling equipments <u>Anisoara Ciocan</u> , Tamara Radu, Florentina Potecasu

P.12.	PhD. Marcela TRIF <i>Babes Bolyai University - Raluca Ripan Chemistry Research Institute, Cluj-Napoca, ROMANIA.</i>	Metal Oxide-Hydroxyapatite Biphasic Materials Studied by SEM Microscopy. <u>M. Trif</u> , M. Moldovan, D. Prodan, C. Prejmerean, C. Sarosi, L. Silaghi-Dumitrescu, M. Rusu, Cornel Trisca Rusu.
P.13.	Doina PRODAN <i>Babes Bolyai University - Raluca Ripan Chemistry Research Institute, Cluj-Napoca, ROMANIA</i>	SEM Study for Interaction Between Biocomposites and Co Alloys <u>D. Prodan</u> , M. Moldovan, I. Roman, M. Trif, C. Prejmerean, O. Musat, G. Ioncea, L. Silaghi Dumitrescu
P.14.	Dr. Gabriel FURTOS <i>Babes Bolyai University - Raluca Ripan Chemistry Research Institute, Cluj-Napoca, ROMANIA</i>	Radiopacity of flowable resin composites compared with human tooth structure. <u>G. Furtos</u> , B. Baldea, D. Bratu, C. Prejmerean, L. Silaghi-Dumitrescu
P.15.	PhD. Laura SILAGHI-DUMITRESCU <i>Babes Bolyai University - Raluca Ripan Chemistry Research Institute, Cluj-Napoca, ROMANIA</i>	The Effect of Experimental Bleaching Agent on Dental Composites. <u>L. Silaghi-Dumitrescu</u> , M. Moldovan, C. Prejmerean, G. Furtos, D. Prodan, D. Dudea, C. Sarosi, S. Boboia.
P.16.	Stud. Stanca BOBOIA <i>Babes Bolyai University - Raluca Ripan Chemistry Research Institute, Cluj-Napoca, ROMANIA</i>	Biological tests for new experimental nanocomposites. <u>S. Boboia</u> , M. Moldovan, C. Sarosi, C. Prejmerean, O. Musat, M. Trif, D. Prodan, L. Silaghi Dumitrescu, G. Furtos.
P.17.	PhD. Codruta SAROSI <i>Babes Bolyai University - Raluca Ripan Chemistry Research Institute, Cluj-Napoca, ROMANIA</i>	Degree of Conversion of Some New Experimental Dental Adhesives. <u>C. Sarosi</u> , M. Moldovan, O. Fodor, C. Prejmerean, G. Popescu, M. Trif, M. Rusu, S. Boboia.
P18	Guenter SCHMITT <i>Institut für Instandhaltung und Korrosionsschutztechnik gGmbH, Iserlohn, Germany</i>	Guenter SCHMITT (WG1&WG3) MIC in Stainless Steel Plumbing Systems for Drinking Water. <u>Guenter Schmitt</u> , Hubertus Schlerkmann, Wolfgang Sand, H. Klemp <i>Institut für Instandhaltung und Korrosionsschutztechnik gGmbH, Iserlohn, Germany</i>

---//---