

Monday Morning			
	7 th IVM		5 th ETCHC
9h00m	Opening Cerimony		
9h10m	Plenary session 1 J.L. de Segovia, Instituto de Ciencia de Materiales de Madrid (former IUVSTA President) "History of Vacuum"		
10h00m	Plenary session 2 G. Fortunato, Flexidis and IMM- CNR, Italy "Low temperature polysilicon TFTs on polyimide substrates for flexible electronics"		
11h00m	Coffee break		
11h20m	7IVM Oral 01 C. Petitjean, D. Horwat and <u>J.F. Pierson</u> "Structure and properties of sputtered Ag-Cu-O films: effect of the oxygen flow rate and of the target chemical composition"	7IVM Oral 06 Baogui Shi, John L.Sullivan and Sayah O.Saied "Sputtered Carbon coating Characterization and Bias voltage effect"	5ETCHC Invited 01 <u>Rámon Escobar Galindo</u> , R. Gago, A. Lousa, C .Palacio, J.M. Albella, Autonoma University of Madrid, Spain "Advanced characterization of nanometer multilayers: depth profiling comparison of RBS, SIMS, XPS and GDOES"
11h40m	7IVM Oral 02 C.A.A. Ghumman, A.M.C. Moutinho, V. Vassilenko and O.M.N.D. Teodoro "Investigation on renal stone analysis with ToF-SIMS"	7IVM Oral 07 <u>John L.Sullivan</u> "Physical properties of ultra fast deposited micro and nano thickness amorphous hydrogenated carbon films for medical devices and prostheses"	
12h00m	7IVM Oral 03 Hugo Águas, Sergej A. Filonovich, <u>Wona A. Bernacka</u> , Elvira Fortunato and Rodrigo Martins "Highly conductive p-type nanocrystalline silicon films deposited by rf-PECVD using silane and trimethylboron mixtures at high pressure"	7IVM Oral 08 <u>A. Cavaleiro</u> Adhesion problems related with deficient ion cleaning of the substrates	5ETCHC Invited 02 <u>Luis Rebouta</u> , F. Vaz(a), S. Carvalho and K. Shein, Department of Physics, Universidade do Minho, Portugal "Superhard nanostructured coatings: structure and properties relations"
12h20m	7IVM Oral 04 S. Carmona, C. Palacio, O. Sánchez, M. Aguilar, <u>C. Falcony</u> , J. Guzmán, M. Canseco, G. Alarcón and M. García "Interface properties of Al ₂ O ₃ thin films deposited on c-Si by pulsed ultrasonic sprayed pyrolysis"	7IVM Oral 09 <u>Manuel Evaristo</u> , Tomas Polcar and Albano Cavaleiro "Synthesis and structural properties of W-Se-C coatings deposited by PVD in reactive and non-reactive processes"	
12h40m	7IVM Oral 05 <u>António Vieira</u> , Maria Machado Angelo Yializis and Gordon Goodyear "High speed surface functionalization of woven and non woven textiles"	7IVM Oral 10 A.L. Shaula, V.A. Kolotygin, J.C. Oliveira, V.V. Kharton and A.A. Cavaleiro "Protective YSZ-based thin films deposited by RF magnetron sputtering"	5ETCHC Oral 01 <u>Alberto Alberdi</u> , Beatriz Díaz, Marcos Marín, Josu Goikoetxea, Unai Ruiz de Gopegui and Borja Coto "Synthesis and Properties of Silicon-Aluminium Based Nanocomposite Coatings"
13h00m	Lunch		

Monday Afternoon		
	7 th IVM	5 th ETCHC
14h20m	Plenary session 3 Ron Naaman, The Weizmann Institute of Science, Israel "Cooperative Molecular Field Effect- A Source for New Electronic Properties at Interfaces"	
15h20m	7IVM Invited 01 <u>Pierre Jamoton</u> , Facility Department, Low Temperatures Laboratory, Centre Spatial de Liege, Université de Liège "Planck Cryogenic Testing in CSL Premises, Helium Partial Pressure Management"	5ETCHC Invited 03 <u>Tomas Polcar</u> , M. Evaristo, and A. Cavaleiro, University of Coimbra, Portugal "Transition metal dichalcogenides alloyed with carbon: a new class of self-lubricating coating"
16h00m	Coffee break	
16h20m	7IVM Invited 02 <u>Wolfgang Jitschin</u> , University of Applied Sciences Giessen-Friedberg, Germany "Precise flow measurement of arbitrary gas species over a wide range"	5ETCHC Invited 04 <u>Johan Böhlmark</u> , Grzegorz Greczynski, Rainer Cremer, Yutao Pei, and Ulf Helmersson, CEO Chemfilt Ion sputtering AB Linköping, Sweden "High Power Impulse Magnetron Sputtering – an overview of history, properties and current status"
17h00m	7IVM Oral 11 I. Catarino, D. Martins, J. Afonso, L. Duband and <u>G. Bonfait</u> "H ₂ and Ne Gas Gap Heat Switches"	5ETCHC Oral 02 <u>Alderson Neira</u> , Federico Sequeda, Alexander Ruden and Juan M. Gonzáles "PVD Nitride Hard Coatings Production on Chromium Based Tool Steel Substrates"
17h20m	7IVM Invited 03 <u>Lluís Miralles</u> , CELLS Engineering Division, Barcelona, Spain "ALBA Spanish Synchrotron Light Source- Vacuum System Status"	5ETCHC Invited 05 <u>Wolfgang Diehl</u> , Fraunhofer-Institut für Schicht- und Oberflächentechnik, Braunschweig, Germany "Hard coatings produced by plasma processes – technology and recent applications"

Tuesday Morning		
	7 th IVM	5 th ETCHC
9h00m	Plenary session 4 Geoff Thornton, London Centre for Nanotechnology, University College London, UK "Nanoscale science on metal oxide surfaces"	
10h00m	7IVM Invited 04 <u>João Pedro Conde</u> , Department of Chemical and Biological Engineering, Instituto Técnico, Lisbon, Portugal "Thin-film silicon MEMS"	5ETCHC Invited 06 <u>F. Bénédic</u> , D. Monéger, G. Lombardi, K. Hassouni, A. Michau, M.B. Assouar, O. Elmazria, A. Gicquel, P. Alnot, Laboratoire d'Ingénierie des Matériaux et des Hautes Pressions, CNRS, Université Paris 13, France "Nanocrystalline diamond films: from growth to applications"
10h40m	7IVM Oral 12 <u>P. Alpuim</u> , P.F. Rocha, S. Lanceros-Mendez, E.S. Marins, I.G. Trindade, J.G. Rocha and M.A. Carvalho "Ultra-Sensitive Shape Sensor Test Structures Based on Piezo-Resistive Doped Nanocrystalline Silicon"	5ETCHC Oral 03 J. Romero, L.A. Yate, L. Martínez de Olcoz, J. Esteve, C. Gomez-Aleixandre and <u>A. Lousa</u> "Amorphous carbon/Cr ₃ C ₂ nanocomposite thin films"
11h00m	Coffee break	
11h20m	7IVM Invited 05 R. Caillard, G. Otero, L. Alvarez, C. Sánchez-Sánchez, M. F. López, J. Mendez and <u>J.A. Martín-Gago</u> Instituto de Ciencia de Materiales de Madrid, Spain "Structure and self-organization of organic and bio molecules on single crystal Surfaces"	5ETCHC Invited 07 <u>Philippe Steyer</u> , A. Mege, G. Thollet, C. Esnouf, Laboratoire de Physico-Chimie Industrielle, INSA de Lyon, France "How to design nanostructured PVD nitrides based coatings for increasing the durability of steel?"
12h00m	7IVM Invited 06 <u>Nuno Peres</u> , Department of Physics, Universidade do Minho, Portugal "The electronic properties of graphene"	5ETCHC Invited 08 F.A. Almeida, A.J.S. Fernandes, F.J. Oliveira and <u>R.F. Silva</u> , Ceramics & Glass Eng. Dept. University of Aveiro, Portugal "Semi-Orthogonal Cutting of Hardmetal with CVD Diamond at Different Rake Angle"
12h40m	7IVM Oral 13 <u>V.Vassilenko</u> , H.Marques, O.M.N.D.Teodoro and . A.M.C. Moutinho "Formation and thermal stability of monolayer and multilayer films by azidoacetone decomposition onto rhodium surfaces"	7IVM Oral 04 V. Rachpech, <u>J.F. Pierson</u> , S. Weber and A. Billard "Effect of air annealing on the structure and the hardness of Cr-Si-N coatings deposited using a hybrid arc-magnetron process"
13h00m	Lunch	

Tuesday Afternoon		
	7 th IVM	5 th ETCHC
14h20m	Poster session	
16h00m	Coffee break	
16h20m	Excursion	
20h00m	Conference dinner	

Wednesday Morning		
	7 th IVM	5 th ETCHC
9h00m	Plenary session 5. Marcel Rost, Kamerlingh Onnes Laboratory, Leiden University, The Netherlands "In-situ, Real-time Observation of Thin Film Deposition: Roughening, Zeno, Grain Boundary Crossing Barrier, and Steering"	
10h00m	7IVM Invited 07 <u>Jatin K. Rath</u> , SID-Physics of Devices, RvdG Laboratory, Utrecht University, The Netherlands "In-situ diagnostics in VHF PECVD process : A crucial aspect for fast fabrication of thin film silicon solar cells"	5ETCHC Invited 09 <u>Rafael Rodriguez</u> , AIN-Centro de Ingeniería Avanzada de Superficies, 31191 Cordovilla, Pamplona, Spain "New trends in decorative and functional coatings"
10h40m	7IVM Oral 12 <u>Eduardo Alves</u> , Nuno Barradas, F. Munnik, Teresa Monteiro, Marco Peres, Jinzhong Wang, Rodrigo Martins and Elvira Fortunato "Structural and optical properties of nitrogen doped ZnO films"	5ETCHC Oral 05 <u>J. A. García</u> , Ibon Azkona, J. Fernandez de Larriona, M.J. Diaz de Cerio, R. Martínez 1, R. J. Rodríguez , R. Escobar and J.M. Albella "Oxidation behaviour of CrAlN, AlTiN and nonocomposite coatings"
11h00m	Coffee break	
11h20m	7IVM Invited 08 <u>Olinda Conde</u> , Nicoleta Popovici and M. Luísa Paramés, Department of Physics, Universidade de Lisboa, Portugal "Pulsed Laser Deposition of Oxide-based thin films for spintronics"	5ETCHC Oral 06 <u>C. Louro</u> : J.C. Oliveira, N.M.G. Parreira and A. Cavaleiro "Effect of O Addition on the Thermal Behaviour of Hard W-N Sputtered Coatings"
11h40m		5ETCHC Oral 07 <u>B. Skoric</u> , D. Kakas, A. Miletic and G. Favaro "The Nano Modification of Duplex Hard Coatings with Nitrogen Ion Implantation"
12h00m	Plenary session 6. Akhlesh Lakhtakia, Pennsylvania State University, University Park, USA "Elastodynamics of Inorganic and Polymeric Sculptured Thin Films"	
13h00m	Lunch & Conference ends	

Plenary Speakers:

1. **J.L. de Segovia**, Instituto de Ciencia de Materiales de Madrid (former IUVSTA President), Spain
"History of Vacuum"
2. **Guglielmo Fortunato**, Flexidis and IMM- CNR, Italy
"Low temperature polysilicon TFTs on polyimide substrates for flexible electronics"
3. **Ron Naaman**, The Weizmann Institute of Science, Israel
"Cooperative Molecular Field Effect- A Source for New Electronic Properties at Interfaces"
4. **Geoff Thornton**, London Centre for Nanotechnology, University College London, UK
"Nanoscale science on metal oxide surfaces"
5. **Marcel Rost**, Kamerlingh Onnes Laboratory, Leiden University, The Netherlands
"In-situ, Real-time Observation of Thin Film Deposition: Roughening, Zeno, Grain Boundary Crossing Barrier, and Steering"
6. **Akhlesh Lakhtakia**, Pennsylvania State University, University Park, USA
"Elastodynamics of Inorganic and Polymeric Sculptured Thin Films"

Invited speakers — 5th Iberian Vacuum Meeting:

1. **Pierre Jamoton**, Facility Department, Low Temperatures Laboratory, Centre Spatial de Liège, Université de Liège
"Planck Cryogenic Testing in CSL Premises, Helium Partial Pressure Management"
2. **Wolfgang Jitschin**, University of Applied Sciences Giessen-Friedberg, Germany
"Precise flow measurement of arbitrary gas species over a wide range"
3. **Lluís Miralles**, CELLS Engineering Division, Barcelona, Spain
"ALBA Spanish Synchrotron Light Source- Vacuum System Status"
4. **João Pedro Conde**, Department of Chemical and Biological Engineering, Instituto Superior Técnico, Lisbon, Portugal
"Thin-film silicon MEMS"
5. **Jose A. Martín Gago**, Instituto de Ciencia de Materiales de Madrid, Spain
"Structure and self-organization of organic and bio molecules on single crystal Surfaces"
6. **Nuno Peres**, Department of Physics, Universidade do Minho, Portugal
"The electronic properties of graphene"
7. **Jatin K. Rath**, SID-Physics of Devices, RvdG Laboratory, Utrecht University, The Netherlands
"In-situ diagnostics in VHF PECVD process : A crucial aspect for fast fabrication of thin film silicon solar cells"
8. **Olinda Conde**, Department of Physics, Universidade de Lisboa, Portugal
"Pulsed Laser Deposition of Oxide-based thin films for spintronics"

Invited speakers — 5th European Topical Conference on Hard Coatings Vacuum Meeting:

1. **Rámon Escobar Galindo**, Autonoma University of Madrid, Spain
"Advanced characterisation of nanometer multilayers: depth profiling comparison of RBS, SIMS, XPS and GDOES"
2. **Luis Rebouta**, Department of Physics, Universidade do Minho, Portugal
"Superhard nanostructured coatings: structure and properties relations"
3. **Tomas Polcar**, University of Coimbra, Portugal
"Transition metal dichalcogenides alloyed with carbon: a new class of self-lubricating coating"
4. **Johan Böhlmark**, CEO Chemfilit Ion sputtering AB Linköping, Sweden
"High Power Impulse Magnetron Sputtering – an overview of history, properties and current status"
5. **Wolfgang Diehl**, Fraunhofer-Institut für Schicht- und Oberflächentechnik, Braunschweig, Germany
"Hard coatings produced by plasma processes – technology and recent applications"
6. **Fabien Bénédic**, Laboratoire d'Ingénierie des Matériaux et des Hautes Pressions, CNRS, Université Paris 13, France
"Nanocrystalline diamond films: from growth to applications"
7. **Philippe Steyer**, Laboratoire de Physico-Chimie Industrielle, INSA de Lyon, France
"How to design nanostructured PVD nitrides based coatings for increasing the durability of steel?"
8. **Rui Silva**, Ceramics & Glass Eng. Dept. University of Aveiro, Portugal
"Semi-Orthogonal Cutting of Hardmetal with CVD Diamond at Different Rake Angle"
9. **Rafael Rodriguez**, AIN-Centro de Ingeniería Avanzada de Superficies, 31191 Cordovilla, Pamplona, Spain
New trends in decorative and functional coatings