



16th International Conference on HIPIMS

Programme of Events

Cutlers' Hall, Church Street, Sheffield, S1 1HG, United Kingdom

Day One | Wednesday 17 June 2026

7:00 – 8:00 **Registration**

8:00 - 8:30 **Welcome Address** by

Prof. Arutiun P. Ehiasarian, National HIPIMS Technology Centre – UK,
Dr. Alex Prince, Director of Research and Innovation Office, Sheffield Hallam University
Prof. Jane Smith-McGuire, Dean for Research, Sheffield Hallam University

First Morning Session	8:30 – 9:30
<p>Protective Ti coatings on BPP for proton exchange water electrolysis prepared by HIPIMS technology Stefan Koerner, Ingmar Bialuch, Ralf Bandorf <i>¹Fraunhofer IST, Riedenkamp 2, 38108 Braunschweig, Germany</i></p>	
<p>Fantastic Coatings and Where to Find Them: A HIPIMS Story Marjorie. Cavarroc-Weimer¹, Aurélie Achille², Erwan Peigney², Julien Neyrat^{1,2}, Célia Dieudonné², Expedit Sèna Adjovi⁴, Sara Fazeli³, Thomas Vaubois¹, Edern Menou¹, Dominique Michau², Isabelle Braems⁴, Pascal Brault³, Angéline Poulon-Quintin² <i>¹SAFRAN Paris-Saclay – SAFRAN Tech, Magny-Les-Hameaux, France</i> <i>²CNRS, Univ. Bordeaux, ICMCB, UMR 5026, F-33600 Pessac, France</i> <i>³MS4ALL, 1 avenue du champ de Mars, F45100, Orléans, France</i> <i>⁴ Nantes Université, CNRS, Institut des Matériaux de Nantes Jean Rouxel, IMN, 44000 Nantes, France</i></p>	
<p>Combinatorial sampling of CrAlN HIPIMS coatings Joern Kohlscheen <i>Kennametal GmbH, Altweiherstrasse 27-31, 91320 Ebermannstadt, Germany</i></p>	
Coffee Break	9:30 – 10:00

Second Morning Session	
HIPIMS: Advanced Coating Technology from an Industrial Manufacturing Perspective	10:00 – 11:00
<p>Dr. Philipp Immich¹, Andreas Fuchs¹, <u>Julia Janowitz</u>¹ (presenting author), Chinmay Trivedi¹, Daniel Barnholt¹, Rick Schmitz¹, Louis Tegelears¹ ¹<i>IHI Hauzer Techno Coating B.V., Van Heemskerckweg 22, 5928 LL Venlo, The Netherlands</i></p>	
<p>Using W⁺ ion bombardment to reduce energy consumption during TiAlWN coating deposition under industrial conditions</p> <p>Klaus Pagh Almtoft¹, Kristian Rechendorff¹, <u>Mette Rydder</u>¹, Sanjay Kumar² and Grzegorz Greczynski² ¹ <i>Danish Technological Institute, DK-8000 Aarhus, Denmark</i> ² <i>Thin Film Physics Division, Department of Physics, Chemistry, and Biology (IFM), Linköping University, SE-581 83 Linköping, Sweden</i></p>	
<p>Time-dependent ionisation region modelling of Ti/Ar HiPIMS and e-HiPIMS discharges</p> <p>Coline Chartrain, <u>Rim Ettouri</u>, Dimitri Boivin, Pierre-Yves Jouan, Ahmed Rhallabi <i>Nantes Université, CNRS, Institut des Matériaux de Nantes Jean Rouxel, IMN, F-44000 Nantes, France</i></p>	
Coffee Break	11:00 – 11:30
Third Morning Session	
Time resolved optical emission spectroscopy of e-HiPIMS discharges	11:30 – 12:30
<p>D. Boivin¹, R. Jean-Marie-Désirée², S. Cuynet², L. De Poucques², R. Ettouri¹, A. Rhallabi¹, P-Y. Jouan¹ ¹ <i>Nantes Université, CNRS, Institut des Matériaux de Nantes Jean Rouxel, IMN, F-44000 Nantes, France</i> ² <i>Université de Lorraine, CNRS, IJL, F-54000 Nancy, France</i></p>	
<p>Electron Density Measurements by a Multipole Resonance Probe in HiPIMS Processes</p> <p>K. Bobzin⁽¹⁾, M. P. Möbius⁽¹⁾, <u>S. Cirakman</u>^{*(1)}, M. Oberberg⁽²⁾, G. Mellar⁽²⁾, B. Berger⁽²⁾ ¹ <i>Surface Engineering Institute, RWTH Aachen, Kackertstrasse 15, 52072 Aachen, Germany</i> ² <i>House of Plasma GmbH, Universitätsstrasse 136, 44799 Bochum, Germany</i></p>	
<p>Hybrid Cleaning of Components prior to High-Tech Coating</p> <p>Karl Trautz <i>HEMO GmbH, Germany</i></p>	
Conference Photograph	12:30 – 12:40

Lunch Break	12:40 – 13:30
--------------------	----------------------

First Afternoon Session	13:30 – 14:30
<p>HiPIMS coatings for micro tools Christoph Schiffers* <i>CemeCon AG; Adenauerstrasse 20A4, 52146 Würselen, Germany</i></p>	
<p>High-Power Pulsed Bipolar Dual-Magnetron Sputtering Technology Using Cylindrical Cathodes for Deposition of Advanced Coatings in Industrial Applications Omar Benzine, Daniel Karpinski, Guillaume Wahli, Christian Krieg, Pavla Karvankova, Jan Kluson, Hamid Bolvardi, Andreas Lümkmann <i>Platit AG, Switzerland PLATIT a.s., Czechia</i></p>	
<p>Effect of carbon content on the structural, mechanical and corrosion properties of TiC films deposited using a HiPIMS discharge H. Larhlimi¹, O. Abegunde¹, Y. Samih¹, <u>Anas Ghailane</u>², M. Makha¹, J. Alami¹ ¹Materials Science, Energy and Nano-engineering department, University Mohammed VI Polytechnic (UM6P), Lot 660, Hay Moulay Rachid, 43150 Benguerir, Morocco ²Avaluxe Coating Technologies GmbH & Co. KG // Georg-Benda-Str. 10 // D-90763 Fürth, Germany</p>	
Coffee Break	14:30 – 15:00

Second Afternoon Session	15:00 – 16:00
<p>HIPIMS Growth of Ordered Magnetic Alloys: Opportunities and Challenges <u>W. Griggs</u>^{1,*}, N. Naushad¹, T. Thomson¹ ¹<i>Nano Engineering and Spintronic Technologies (NEST) research group, Department of Computer Science, The University of Manchester, Manchester M13 9PL, United Kingdom</i></p>	
<p>Copper Plasma Characteristics and Power-Supply Parameter Effects in HIPIMS for Through-Glass Via Metallization Anna W. Oniszczyk¹, Afaque M. Hossain², Beniamin Łukianowski¹, Wojciech Gajewski¹, Piotr Róžański¹, Arutiun P. Ehasarian³ ¹<i>Trumpf Huettinger Sp. z o.o., Zielonka, Poland</i> ²<i>Trumpf Hüttinger GmbH + Co. KG, Freiburg, Germany</i> ³<i>National HIPIMS Technology Centre – UK, Sheffield Hallam University, Howard St., Sheffield, S1 1WB, UK</i></p>	

<p>Growth-controlled photochromism in yttrium oxyhydride thin films deposited by HiPIMS and pulsed-DC magnetron sputtering M.Zubkins¹, E.Letko¹, E.Strods¹, V.Vibornijs¹, D.Moldarev², K.Sarakinob³, K.Mizohata², K.Kundzins¹, J.Purans¹ ¹ Institute of Solid State Physics, University of Latvia, Kengaraga 8, LV-1063, Riga, Latvia ² Department of Physics, University of Helsinki, P.O. Box 43, FI-00014, Helsinki, Finland ³ KTH Royal Institute of Technology, Department of Physics, Roslagstullsbacken 21, 11421, Stockholm, Sweden</p>	
Coffee Break	16:00 – 16:30
Third Afternoon Session	16:30 – 18:00
<p>HIPIMS Growth of Ordered Magnetic Alloys: Opportunities and Challenges W. Griggs^{1,*}, N. Naushad¹, T. Thomson¹ ¹ Nano Engineering and Spintronic Technologies (NEST) research group, Department of Computer Science, The University of Manchester, Manchester M13 9PL, United Kingdom</p>	
<p>RF-Assisted HIPIMS Operation on a Single Target: Discharge Stabilization and Ionization Behavior in Arcing-Prone Processes Anna W. Oniszczyk¹, Afaq M. Hossain², Wojciech Trzewiczyński¹, Benjamin Łukianowski¹, Wojciech Gajewski¹, Piotr Różański¹ ¹Trumpf Huettinger Sp. z o.o., Zielonka, Poland ²Trumpf Hüttinger GmbH + Co. KG, Freiburg, Germany</p>	
<p>The Role of Cleaning Prior to High-Performance Coating: Choosing the Right Cleaning Chemistry Richard Starkey SAFECHEM Europe GmbH, UK</p>	
<p>Quo Vadis panel discussion session: Surface Engineering for Advanced Manufacturing</p>	18:00 – 18:30
End of first day	18:30
Conference Dinner	19:00 – 21:30

Day Two | Thursday 18 June 2026

First Morning Session	09:30 – 10:00
<p>Antimicrobial activity of superhard nanostructured and plasmonically active TiN-based coatings</p> <p>Thomas J. Smith¹, David S. Owen¹, Arunprabhu Sugumaran², Yashodhan Purandare², Ethan Muir², Ryan Bower³, Bruno Rente³, Peter K. Petrov³, Ming Fu⁴, Rupert Oulton⁴, Papken Eh. Hovsepian², Arutiun P. Ehasarian²</p> <p>¹ Sheffield Hallam University, School of Biosciences and Chemistry, Sheffield, United Kingdom ² Sheffield Hallam University, Materials and Engineering Research Institute, Sheffield, United Kingdom ³ Imperial College London, Department of Materials, London, United Kingdom ⁴ Imperial College London, Department of Physics, London, United Kingdom</p>	
Coffee Break	10:00 – 10:30
Second Morning Session	10:30 – 11:30
<p>HIPIMS for Robust Manufacturable Antimicrobial Surfaces based on Plasmonic Photocatalytic Nanoscale Multilayer Coatings</p> <p>Arutiun P. Ehasarian¹, Thomas J. Smith², David S. Owen², Arunprabhu Sugumaran¹, Yashodhan Purandare¹, Ethan Muir¹, Ryan Bower³, Bruno Rente³, Peter K. Petrov³, Ming Fu⁴, Rupert Oulton⁴, Papken Eh. Hovsepian¹</p> <p>¹ Sheffield Hallam University, Materials and Engineering Research Institute, Sheffield, United Kingdom ² Sheffield Hallam University, School of Biosciences and Chemistry, Sheffield, United Kingdom ³ Imperial College London, Department of Materials, London, United Kingdom ⁴ Imperial College London, Department of Physics, London, United Kingdom</p>	
<p>Tribological Performance of Nano-Patterned Nanoscale Multilayer TiN/NbN Coatings Prepared by HIPIMS</p> <p>Yashodhan Purandare¹, Arunprabhu Sugumaran¹, Ryan Bower², Bruno Rente², Peter K. Petrov², Ming Fu³, Rupert Oulton³, Papken Eh. Hovsepian¹, Arutiun P. Ehasarian¹</p> <p>¹ Sheffield Hallam University, Materials and Engineering Research Institute, Sheffield, United Kingdom ² Imperial College London, Department of Materials, London, United Kingdom ³ Imperial College London, Department of Physics, London, United Kingdom</p>	
<p>Titanium Nitride Deposition by Constant-Current Regulated HIPIMS for Plasmonic Applications: Influence of the Discharge Composition and Pressure</p> <p>Ethan Muir¹, Diederik Depla², Ryan Bower³, Vladimir Kornienko³, Peter K. Petrov³, Ming Fu⁴, Rupert Oulton⁴, Papken Eh. Hovsepian², Arutiun P. Ehasarian²</p> <p>¹ Sheffield Hallam University, Materials and Engineering Research Institute, Sheffield, United Kingdom ² University of Ghent, Belgium ³ Imperial College London, Department of Materials, London, United Kingdom ⁴ Imperial College London, Department of Physics, London, United Kingdom</p>	
Prof. Papken Eh. Hovsepian Prize Announcement	11:30
Closing remarks, A.P. Ehasarian	12:00
Lunch Break	12:30