



Sixteenth International Conference on HIPIMS

17 - 18 June 2026, Sheffield, UK

Programme of Events



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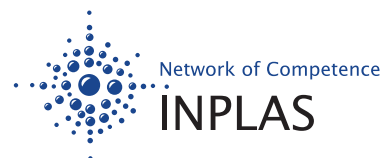
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Programme of Events

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

- Dr. Holger Gerdes, Fraunhofer Institute for Surface Technology, Braunschweig, Germany
- Prof. Jennifer Smith-McGuire, Dean for Research, Sheffield Hallam University, UK
- Prof. Alex Prince, Director of Research and Innovation Office, SHU, UK
- Prof. Arutjun P. Ehiasarian, Conference Chairman, National HIPIMS Technology Centre – UK

First Morning Session

17 June 2026

Chairman: Prof. A.P. Ehiasarian, Sheffield Hallam University, UK

Protective Ti Coatings on BPP for proton Exchange Water Electrolysis 8:30 – 8:50

Prepared by HIPIMS Technology

Stefan Koerner, Ingmar Bialuch, Ralf Bandorf

¹*Fraunhofer IST, Riedenkamp 2,38108 Braunschweig, Germany*

Fantastic Coatings and Where to Find Them: A HIPIMS Story 8:50 – 9:10

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

¹*SAFRAN Paris-Saclay – SAFRAN Tech, Magny-Les-Hameaux, France*

²*CNRS, Univ. Bordeaux, ICMCB, UMR 5026, F-33600 Pessac, France*

³*MS4ALL, 1 avenue du champ de Mars, F45100, Orléans, France*

⁴*Nantes Université, CNRS, Institut des Matériaux de Nantes Jean Rouxel, IMN, 44000 Nantes, France*

Combinatorial Sampling of CrAlN HIPIMS Coatings 9:10 – 9:30

Joern Kohlscheen

Kennametal GmbH, Altweiherstrasse 27-31, 91320 Ebermannstadt, Germany

Coffee Break, Exhibition and Poster Session 9:30 – 10:00

Second Morning Session

17 June 2026

Chairman: David Elliot, Director of Surface Engineering Association, UK

HIPIMS: Advanced Coating Technology from an Industrial Manufacturing Perspective

10:00 – 10:20

Dr. Philipp Immich¹, Andreas Fuchs¹, Julia Janowitz¹ (presenting author), Chinmay Trivedi¹, Daniel Barnholt¹, Rick Schmitz¹, Louis Tegeleers¹
¹*IHI Hauzer Techno Coating B.V., Van Heemskerckweg 22, 5928 LL Venlo, The Netherlands*

Using W⁺ Ion Bombardment To Reduce Energy Consumption During TiAlWN Coating Deposition Under Industrial Conditions

10:20 – 10:40

Klaus Pagh Almqvist¹, Kristian Rechendorff¹, Mette Rydder¹, Sanjay Kumar² and Grzegorz Greczynski²
¹*Danish Technological Institute, DK-8000 Aarhus, Denmark*
²*Thin Film Physics Division, Department of Physics, Chemistry, and Biology (IFM), Linköping University, SE-581 83 Linköping, Sweden*

Time-Dependent Ionisation Region Modelling of Ti/Ar HiPIMS and e-HiPIMS Discharges

10:40 – 11:00

Coline Chartrain, Rim Ettouri, Dimitri Boivin, Pierre-Yves Jouan, Ahmed Rhallabi
Nantes Université, CNRS, Institut des Matériaux de Nantes Jean Rouxel, IMN, F-44000 Nantes, France

Coffee Break, Exhibition and Poster Session

11:00 – 11:30

Third Morning Session**17 June 2026****Chairman: Dr. Martin Engels, IHI Ionbond, The Netherlands****Time Resolved Optical Emission Spectroscopy of e-HIPIMS Discharges 11:30 – 11:50**

D. Boivin¹, R. Jean-Marie-Désirée², S. Cuynet², L. De Poucques², R. Ettouri¹,
A. Rhallabi¹, P.-Y. Jouan¹

¹ *Nantes Université, CNRS, Institut des Matériaux de Nantes Jean Rouxel, IMN, F-44000 Nantes, France*

² *Université de Lorraine, CNRS, IJL, F-54000 Nancy, France*

Time Resolved Investigations on Ion Fraction, Ionization Degree, and Plasma Composition within a HIPIMS Pulse 11:50 – 12:10

Holger Gerdes¹, Ralf Bandorf¹, Stefan Körner¹, Dennis Barton¹, Jan-Peter Urbach², Thomas Schütte², Ying-Hung Chen³, Ping-Yen Hsieh³, Ju-Liang He³

¹ *Fraunhofer IST, Braunschweig, Germany*

² *PLASUS GmbH, Mering, Germany*

³ *Feng Chia University, Taichung City, Taiwan*

Hybrid Cleaning of Components Prior to High-Tech Coating 12:10 – 12:30

Karl Trautz

HEMO GmbH, Germany

Conference Photograph 12:30 – 12:40**Lunch Break, Exhibition and Poster Session 12:40 – 13:30****First Afternoon Session****17 June 2026****Chairwoman: Dr. Marjorie Cavarroc-Weimer, SAFRAN, France****HIPIMS coatings for micro tools 13:30 – 13:50**

Christoph Schiffers*

CemeCon AG; Adenauerstrasse 20A4, 52146 Würselen, Germany

High-Power Pulsed Bipolar Dual-Magnetron Sputtering Technology Using Cylindrical Cathodes for Deposition of Advanced Coatings in Industrial Applications 13:50 – 14:10

Omar Benzine, Daniel Karpinski, Guillaume Wahli, Christian Krieg, Pavla Karvankova, Jan Kluson, Hamid Bolvardi, Andreas Lümekemann

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Effect of Carbon Content on the Structural, Mechanical and Corrosion Properties of TiC Films Deposited Using a HiPIMS Discharge 14:10 – 14:30

H. Larhlimi¹, O. Abegunde¹, Y. Samih¹, Anas Ghailane², 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

Coffee Break, Exhibition and Poster Session 14:30 – 15:00

Second Afternoon Session 17 June 2026

Chairman: Dr. Immich, Hauzer TechnoCoating, The Netherlands

HiPIMS Growth of Ordered Magnetic Alloys: Opportunities and Challenges 15:00 – 15:20

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

Copper Plasma Characteristics and Power-Supply Parameter Effects in HIPIMS for Through-Glass Via Metallization 15:20 – 15:40

Anna W. Oniszczyk¹, Afaque M. Hossain², Beniamin Łukianowski¹, Wojciech Gajewski¹, Piotr Różański¹, Arutjun P. Eghisarian³

¹Trumpf Huettinger Sp. z o.o., Zielonka, Poland

²Trumpf Hüttinger GmbH + Co. KG, Freiburg, Germany

³National HIPIMS Technology Centre – UK, Sheffield Hallam University, Howard St., Sheffield, S1 1WB, UK

Growth-controlled Photochromism In Yttrium Oxyhydride Thin Films Deposited by HiPIMS and Pulsed-DC Magnetron Sputtering 15:40 – 16:00

M. Zubkins¹, E. Letko¹, E. Strods¹, V. Vibornis¹, D. Moldarev², K. Sarakinos³, K. Mizohata², K. Kundzins¹, J. Purans¹

¹Institute 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

Coffee Break, Exhibition and Poster Session 16:00 – 16:30

Third Afternoon Session

17 June 2026

Chairman: Dr. Holger Gerdes, Fraunhofer IST, Germany

Superposition of HIPIMS with RF on a Single Magnetron:

16:30 – 16:50

Generation of High Ion Energies

Caroline Adam¹, Luka Hansen^{1,2}, Tobias A. Hahn¹, Jessica Niemann¹, Daniel Zuhayra¹, Günter Mark³, Jonathan Löffler³, Jan Benedikt^{1,2}, Holger Kersten^{1,2}

¹ *Institute of Experimental and Applied Physics, Kiel University, Kiel, Germany*

² *Kiel Nano, Surface and Interface Science KiNSIS, Kiel University, Kiel, Germany*

³ *MELEC GmbH, Baden-Baden, Germany*

RF-Assisted HIPIMS Operation on a Single Target: Discharge

16:50 – 17:10

Stabilization and Ionization Behavior in Arcing-Prone Processes

Anna W. Oniszczyk¹, Afaque M. Hossain², Wojciech Trzewiczyński¹, Benjamin Łukianowski¹, Wojciech Gajewski¹, Piotr Różański¹

¹ *Trumpf Huettinger Sp. z o.o., Zielonka, Poland*

² *Trumpf Hüttinger GmbH + Co. KG, Freiburg, Germany*

Activities and Opportunities in the UK Space Sector

17:10 – 17:30

Kelvin Shek

Space Hub Yorkshire

Quo Vadis panel discussion session:

17:40 – 18:15

Surface Engineering for Advanced Manufacturing

End of first day

18:15

Conference Dinner

19:00 – 21:30

First Morning Session

18 June 2026

Chairman: David Elliot, Surface Engineering Association, UK

Antimicrobial Activity of Superhard Nanostructured and Plasmonically Active TiN-Based Coatings 09:00 – 09:20

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

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

Room-Temperature Fabrication of TiN Plasmonic Nanoarrays on Flexible Substrates via HIPIMS 09:20 – 09:40

Ryan Bower¹, Daniel A L Loch², Ethan Muir², Bruno Rente¹, Xiaofei Xiao³, Ming Fu³, Papken Eh. Hovsepian², Arutiun P. Ehasarian², Rupert Oulton³, and Peter K. Petrov¹

¹ Department of Materials, Royal School of Mines, Imperial College London, London SW7 2AZ, U.K.

² National HIPIMS Technology Centre, Sheffield Hallam University, Sheffield S1 1WB, U.K.

³ Department of Physics, Blakett Laboratory, Imperial College London, London SW7 2BW, U.K.

HIPIMS for Robust Manufacturable Antimicrobial Surfaces based on Plasmonic Photocatalytic Nanoscale Multilayer Coatings **09:40 – 10:00**

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

¹ *Sheffield Hallam University, National HIPIMS Technology Centre, 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*

Coffee Break, Exhibition and Poster Session

10:00 – 10:30

Second Morning Session

18 June 2026

Chairman: Christoph Schiffrers, CemeCon, Germany

Tribological Performance of Nano-Patterned Nanoscale Multilayer TiN/NbN Coatings Prepared by HIPIMS 10:30 – 10:50

Yashodhan Purandare¹, Arunprabhu Sugumaran¹, Ryan Bower², Bruno Rente², Peter K. Petrov², Ming Fu³, Rupert Oulton³, Papken Eh. Hovsepian¹, Arutian P. Ehasarian¹

¹ *Sheffield Hallam University, National HIPIMS Technology Centre, Sheffield, United Kingdom*

² *Imperial College London, Department of Materials, London, United Kingdom*

³ *Imperial College London, Department of Physics, London, United Kingdom*

Titanium Nitride Deposition by Constant-Current Regulated HIPIMS for Plasmonic Applications: Influence of the Discharge Composition and Pressure 10:50 – 11:10

Ethan Muir¹, Diederik Depla², Ryan Bower³, Vladimir Kornienko³, Peter K. Petrov³, Ming Fu⁴, Rupert Oulton⁴, Papken Eh. Hovsepian², Arutian P. Ehasarian²

¹ *Sheffield Hallam University, National HIPIMS Technology Centre, 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*

The Role of Cleaning Prior to High-Performance Coating: Choosing the Right Cleaning Chemistry 11:10 – 11:30

Richard Starkey

SAFECEM Europe GmbH, UK

Professor Papken Eh. Hovsepian Award Announcement 11:30

Closing remarks, Arutian P. Ehasarian, Holger Gerdes 11:50

Lunch Break, Exhibition and Poster Session 12:00 – 13:30

Poster Presentations | Wednesday 26 and Thursday 27 June 2024

Single Photon Emitter Based on Nano-Structured Silicon Nitride Thin Film

Yuxuan Wang, Ryan Bower, Yongqiang Wen, Neil McN. Alford and Peter K. Petrov
Imperial College London, London SW7 2AZ, UK

Investigating Langmuir-Blodgett Deposition Parameters on the Surface Coverage of Polystyrene-Coated Glass for Use as Substrates for TiN Deposition via HIPIMS

Matthew Hill, Arutiun P. Ehasarian
Sheffield Hallam University, National HIPIMS Technology Centre, Sheffield, United Kingdom

Additive Manufacturing of Thermally Conductive AlN Ceramic Components for Industrial Application

Vahid Nakouie
Sheffield Hallam University, National HIPIMS Technology Centre, Sheffield, United Kingdom



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