

2023 International Forum of High-Density Plasma Coatings and Process Control
2023 高密度電漿鍍膜與製程控制國際論壇

Motive & Goal

Plasma coating technologies cover a wide range of applications, including semiconductors, displays, optoelectronics, mechanical engineering, aerospace, biomedical and consumer product industries. They value up the existing products to ultimate performance or make the impossible products to become possible, fulfilling the unmet needs of industries. Moreover, the global net-zero wind has let plasma coating technologies very important alternatives to conventional routes. On the other hand, the plasma coating technologies are evolving, making themselves more powerful, reliable and energy saving.

Currently, the key to successful plasma coating technologies involves high-density plasma coating system integration, coating materials R&D, as well as intelligence control. As such, DAH YOUNG Vacuum Equipment Co, Ltd., Institute of Plasma, Feng Chia University, Fraunhofer IST and PLASUS GmbH joined together, under the support from Department of Industrial Technology, Taiwan Ministry of Economic Affairs and ZIM, German Federal Ministry for Economic Affairs and Climate Action, to carry out a DE-TW project with fruitful outcome. Therefore, we invite speakers from universities, research institutes and industry together with us to share the latest plasma coating technologies. Greatly welcome your participation!

緣起與目的

電漿鍍膜科技涵蓋領域極大，目前已經應用到所有的產業，從半導體產業、顯示器產業、光電產業、機械產業、航太產業、醫療生技產業、乃至於民生工業，都可以看到電漿鍍膜科技對不同產業的加值，使不可能的產品成為可能，更創造了新的經濟價值。同時，全球對工業鏈減碳淨零的日益重視和要求，使得電漿鍍膜科技成為傳統鍍膜製造之外的最佳選項。然而電漿鍍膜科技自身也在全球產、學、研各界不斷努力下持續演化，提供更強大功能的鍍膜材質、更可靠的製造方法、以及更節能優化的控制方法。

電漿鍍膜科技的現階段發展趨勢包含了高密度電漿薄膜製造設備的開發、鍍膜材料的研發與優化、以及智慧製造的導入。有鑑於此，大永真空設備股份有限公司、逢甲大學電漿科技研究中心、德國 Fraunhofer IST 以及 PLASUS GmbH 聯手，在經濟部技術處補助下執行台德計畫，歷時兩年，成效頗多，於是邀集產、學、研各界，共襄舉辦高密度電漿論壇，一起分享各界的研發成果，期許台灣產業能因此受惠，歡迎各界報名參加！

Forum Agenda

研討會議程

Time	March 14 (Tue) Agenda	
08:30-09:00	Reception	
09:00-09:10	Opening Ceremony & Guest Address/開幕式及貴賓致詞	
09:10-09:45	Keynote Speech: Dr. Ralf Bandorf (35 min) Title: Digital Transformation of Vacuum Coatings	
09:45-10:20	Keynote Speech: Prof. Jyh-Wei Lee (35 min) Title: Fabrication of Transition Metal Nitrides, Carbides and Oxides by Superimposed HiPIMS-MF and Plasma Emission Monitoring Feedback Control	
10:20-10:40	Coffee Break	
10:40-11:05	Invited Speech: Mr. Stefan Körner (25 min) Title: Process Development of Reactive HIPIMS	
11:05-11:30	Invited Speech: Dr. Tony Sung-Mao Chiu (25 min) Title: Application of High Entropy Alloy Coating on Cutting Tool and Die	
11:30-11:55	Invited Speech: Dr. Ping-Yan Hsieh (25 min) Title: HiPIMS Copper Layer on Flexible Substrate for Conformal Electromagnetic Shielding Purpose	
11:55-13:00	Lunch (Lunch box provided)	
13:00-13:35	Keynote Speech: Dr. Thomas Schütte (35 min) Title: Advanced Process Control for Metallic and Reactive HIPIMS Applications in Production Lines	
13:35-14:10	Keynote Speech: Prof. Yoshinobu Kawai (35 min) Title: Behavior of a Bi-polar HiPIMS Plasma	
14:10-14:30	Coffee Break	
14:30-14:55	Invited Speech: Dr. Jan-Peter Urbach (25 min) Title: In-situ Control of Layer Color and Layer Thickness in Plasma Coating Processes	
14:55-15:20	Invited Speech: Prof. Chien-Jen Tang (25 min) Title: Plasma-assisted Reactive Magnetron Sputtering for Optical Coatings	
15:20-15:45	Invited Speech: Dr. Tung-Jung Wu (ULVAC) (25 min) Title: The Future for Coating Equipment Development	
15:45-16:00	Closing Ceremony	

Exhibition/廠商展示

Organizers:

DAH YOUNG Vacuum Equipment Co., Ltd., Feng Chia University

主辦單位：大永真空設備股份有限公司、逢甲大學

Co-organizers:

Taiwan Surface Finishing Association, Metal Industries Research & Development Center, ULVAC, Taiwan Association for Coating and Thin Film Technology, Fraunhofer IST, PLASUS GmbH, AVS Taiwan Chapter

協辦單位：

台灣區表面處理工業同業公會、金屬工業研究發展中心、台灣鍍膜科技協會、優貝克科技股份有限公司、Fraunhofer IST、PLASUS GmbH, AVS Taiwan Chapter

Exhibitors:

Dah Young Vacuum Equipment Co., Ltd. , PLASUS GmbH, MIRDC, LiBRA (TRUMPF Huttlinger), Ultimate Materials Technology Co., Ltd.

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