

PE2

100

1922 2022

Generating Megatrend Solutions

International Conference

Power Electronics for Plasma Engineering

May 31 – June 1, 2022
Freiburg, Germany

11th conference edition

TRUMPF



TRUMPF Hüttinger
generating confidence

Questions?

Please contact us: PE2@trumpf.com

Features

- Listen to expert talks on the latest developments in the plasma industry
- Stay up to date with megatrend solutions
- Network with international participants
- Enjoy an inspiring event with diversified framework program
- Finally have personal exchange with like-minded people again

Framework program

- **Time2Network:** special slots for the expansion of your personal network
- **Company tour:** find out how TRUMPF Hüttinger generates megatrend solutions and meet your engineer for professional exchange
- **Event evening:** in line with the motto „Generating Megatrend Solutions“. Get carried away with an exceptional teamwork experience and stress-free entertainment
- **Barbecue:** look forward to delicious barbecue specialties
- **Catering:** let yourself be provided with regional food, snacks and drinks throughout the evening

Location

Let yourself be enchanted by this year's location in sunny Freiburg im Breisgau.
See more on page 11.



Why attending this conference?



Dear valued partner,

We are delighted to welcome you back to our PE² conference – in our anniversary year. 100 years of TRUMPF Hüttinger!

“Generating Megatrend Solutions”

is the theme of the 11th Power Electronics for Plasma Engineering Conference. As modern technologies are unthinkable today without high-performance chips, especially in the major topics of our time, such as digitalization, energy transition, e-mobility, communication or green technology we will focus on semiconductors to be used for various leading-edge technologies.

Experience exciting insights into technologies and trends through presentations by 25 international leading experts from industry and research. You can also look forward to inspiring poster sessions and ideal networking opportunities.

Are you with us? We look forward to welcoming you to Freiburg!

Your TRUMPF Hüttinger Team



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Session 1

Green technology

As “green” in the name already implies, green technology features an obligation on sustainable innovations that consider short and long-term environmental impacts.

Session 2

Semiconductor

Driven by the use of more and more electronic components in end products, the semiconductor industry is turning to a new time period where cost reduction and scaling of components can no longer continue on the path of the last decades. In addition, the global pandemic has increased demand for digitization, which has further accelerated demand for components. To meet the demands of the market, the industry is looking for technology solutions to bridge the gap and improve the price-performance ratio while expanding functionality through integration. Learn about how we and our partners deal with these challenges.

Session 3

Industrial

Digitization is taking place in all areas of manufacturing – the coatings sector is no exception. The amount of data that can be leveraged to improve all business activities – from new product development to production and customer service – is increasing rapidly.

Overview sessions

May 30th

from 18⁰⁰ Casual barbecue
@ TRUMPF Hüttinger

Day 1, May 31st
Green technology & Semiconductor

08⁰⁰ - 09¹⁵ Conference registration
& Welcome

09¹⁵ - 10⁴⁵ "Green technology"

10⁴⁵ - 11¹⁵ Time2Network

11¹⁵ - 12³⁰ "Semiconductor"

12³⁰ - 13³⁰ Lunch break

13³⁰ - 15⁰⁰ "Semiconductor"

15⁰⁰ - 15³⁰ Time2Network

15³⁰ - 17³⁵ "Semiconductor"

from 17⁴⁵ Evening event
@ Conference location

Day 2, June 1st
Industrial

08³⁰ - 11⁰⁰ Company tour

11⁰⁰ - 11³⁰ Time2Network

11³⁰ - 13⁰⁰ "Industrial"



13⁰⁰ - 14³⁰ Lunch break

14³⁰ - 16⁴⁰ "Industrial"


16⁴⁰ - 17⁰⁰ Conclusion of conference

from 17³⁰ Exploration of Freiburg
and beer tasting



Conference fee 350 €, for further information and early bird please visit www.trumpf.com/s/PE2

	Conference registration	08⁰⁰ - 08⁴⁵	
	Welcome – Start of the conference	08 ⁴⁵ - 09 ¹⁵	
	Session: Green technology		
1	Keynote talk: Energy transition & CO ₂ neutrality accelerated by TRUMPF Huettinger power supplies	09 ¹⁵ - 09 ⁴⁵ *	Dr. Carsten Winnewisser, TRUMPF Hüttinger, DE
2	Pulsed microwave plasma for CO ₂ -recycling	09 ⁴⁵ - 10 ⁰⁵ *	Dr. Guido Link, Karlsruhe Institute of Technology, DE
3	The use of microwave plasma to control the growth kinetics of materials	10 ⁰⁵ - 10 ²⁵ *	Michael Stowell, Lyten, US
4	Oxygen removal in coke oven gas and further opportunities of non-thermal plasma for green technologies	10 ²⁵ - 10 ⁴⁵ *	Dr. Tim Nitsche, Fraunhofer, DE
	 Time2Network / Meet the engineers!	10⁴⁵ - 11¹⁵	
	Session: Semiconductor		
5	Expert talk: Strategic semiconductor industry: From emerging to mainstream technologies, challenges and opportunities for the next decade	11 ¹⁵ - 12 ¹⁰ *	Guillaume Girardin, Yole, FR
6	The TRUMPF drive laser for EUV lithography	12 ¹⁰ - 12 ³⁰ *	Matthias Wissert, TRUMPF Laser Systems for Semiconductor Manufacturing, DE
	 Lunch break	12³⁰ - 13³⁰	

* incl. 5 mins discussion

	Session: Semiconductor		
7	Process control by voltage waveform tailoring in high frequency technological plasmas	13 ³⁰ - 14 ⁰⁰ *	Prof. Dr. Julian Schulze, Ruhr-University Bochum, DE
8	PEALD (Plasma Enhanced Layer Deposition) and ALE (Atomic Layer Etch) with high quality films and thruput in one chamber FALP (Fast Atomic Layer Processing)	14 ⁰⁰ - 14 ²⁰ *	Stephan Wege, Plasway Technologies, DE
9	Requirements of RF features in plasma etching applications (recorded talk)	14 ²⁰ - 14 ⁴⁰ *	Dr. Xu Lei, AMEC, CN
10	Faster, smaller, TRUMPF – new approach to RF Matching	14 ⁴⁰ - 15 ⁰⁰ *	Helmut Strycek, TRUMPF Hüttinger, DE
	Time2Network / Meet the engineers!	15⁰⁰ - 15³⁰	
	Session: Semiconductor		
11	Keynote talk: Semiconductor fabrication is powering global economic growth	15 ³⁰ - 16 ⁰⁰ *	Robert Larisch, Applied Materials, US
12	Different approaches for substrate biasing in etch applications	16 ⁰⁰ - 16 ²⁰ *	Dr. Wojciech Gajewski, TRUMPF Hüttinger, PL
13	Improving sustainability of older semiconductor manufacturing equipment	16 ²⁰ - 16 ⁴⁰ *	Carl Almgren, Frontier Technical, US
14	Expert talk: Future matters – 520 weeks of future – developments, disruptions and tipping points in the next 10 years in energy and engineering	16 ⁴⁰ - 17 ³⁵ *	Lars Thomsen, CH
	Conclusion day 1	17 ³⁵ - 17 ⁴⁵	
	Evening event with fingerfood @ Conference location	17⁴⁵ - 21⁰⁰	

* incl. 5 mins discussion

	Company tour (including travel)	08³⁰ - 11⁰⁰	
	Time2Network / Meet the engineers!	11⁰⁰ - 11³⁰	
	Session: Industrial		
15	Keynote: Towards creation of a digital twin of the plasma synthesis of functional materials by high power impulse magnetron sputtering and other PVD processes – monitor the process and predict outcomes	11 ³⁰ - 12 ⁰⁰ *	Prof. Dr. Arutiun P. Ehasarian, Sheffield University, UK
16	A versatile inline vacuum coater to address the industrial challenge of upscaling	12 ⁰⁰ - 12 ²⁰ *	Dr. Simon Hübner, Singulus, DE
17	Preparing for the future: Connected sputter components	12 ²⁰ - 12 ⁴⁰ *	Dr. Wilmert De Bosscher, Soleras, BE
18	Low-temperature scalable deposition of thermochromic VO ₂ -based coatings for energy-saving smart windows	12 ⁴⁰ - 13 ⁰⁰ *	Prof. Dr. Jaroslav Vlček, Plzen University, CZ
	Lunch break	13⁰⁰ - 14³⁰	
19	Process power solutions for the next technology nodes	14 ³⁰ - 14 ⁵⁰ *	Dr. Jan Peter Engelstädter, TRUMPF Hüttinger, DE

* incl. 5 mins discussion

Session: Industrial

20	A new generation of scalable gas ionizers and small diameter rotary magnetron cathodes for cost effective manufacturing of high quality thin films	14 ⁵⁰ - 15 ²⁰ *	David Stevenson, Ampres, US
21	Innovative sputtering target solutions by powder metallurgy	15 ²⁰ - 15 ⁴⁰ *	Christian Linke, Plansee, AT
22	Nb ₂ O ₅ - and SiO ₂ -based interference filters produced with a novel sputtering platform for double-sided precision optical coatings	15 ⁴⁰ - 16 ⁰⁰ *	Michael Schneider, Von Ardenne, DE
23	Large scale aluminum zinc oxide sputtering process optimization on industrial vacuum coater	16 ⁰⁰ - 16 ²⁰ *	Dr. Andris Voitkans, Groglass, LV
24	A novel and versatile R2R multilayer coating system for optical multi-layer applications	16 ²⁰ - 16 ⁴⁰ *	Dr. Michael Muecke, Bühler Alzenau, DE

Conclusion day 2 16⁴⁰ - 17⁰⁰

Exploration of Freiburg and beer tasting from 17³⁰

Please visit our website for latest news and abstracts: www.trumpf.com/s/PE2

* incl. 5 mins discussion

Freiburg



What can you do around the conference? Let yourself be enchanted by this year's location in sunny Freiburg im Breisgau. Discover the area and experience the mix of historical sights and modern life. Beautifully situated in the border triangle in direct proximity to the French and Swiss borders and the entrance to the Black Forest in eastern direction – Freiburg is scenic alone an experience with a lot of nature, a lot of space and good wine from the famous adjacent "Kaiserstuhl". Allegedly, every second German would prefer to live in Freiburg. In fact, there are so many reasons to fall madly in love with this city that one can hardly list them all.





Conference venue

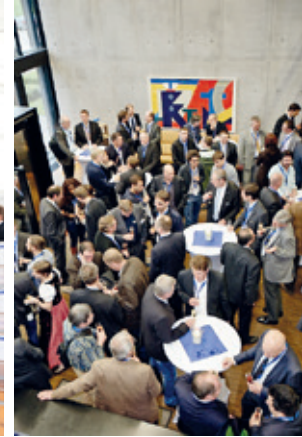
Forum Merzhausen

Forum Merzhausen
Am Marktplatz 4
79249 Merzhausen

www.merzhausen.de/FORUM-Veranstaltungen



Impressions of past conferences







PE² International Conference on Power Electronics for Plasma Engineering May 14 - 17, 2018 - Freiburg, Germany



Impressions

Registration

Conference
website



Company
website



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