

Scientific and Technical Directorate(STD)

Jay Hendricks, Scientific Director
Katsuyuki Fukutani, Scientific Secretary



ECM-136
Virtual Meeting
March 25th, 2022



Scientific Director's Forward View

The Scientific and Technical Directorate (STD) coordinates the Scientific and Technical activities of the Nine IUVSTA Divisions

- **Communication:** “Serve as an international communication ‘hub’ that connects vacuum science and technology scientists around the world”.
- **Education:** Work with Division Chairs to develop *Workshops, Schools, Short Courses, and Technical Training*
- **IVC Scientific:** Work with IUVSTA Division Chairs to Develop IVC-22 Program and abstract calls through the international program committee.
- **Society Impact:** Find Applications where our science has positive impact for society.
IYBSS 2022! Support for science in less developed countries .
- **Focus Topics:**
 - Technologies for Sustainability (clean water, air, energy)
 - Quantum Science (AVS Quantum Science journal, Quantum Based Units, Quantum Computing/deep learning).
 - Photonics and Nano photonics (multiple technologies, including bio applications)
 - Role of Sensors and Sensor Science (AI, Self-driving cars, weather, health, safety)
 - Next Gen. Energy (Fusion, Solar, new materials and process enabling technologies, batteries)

2019-2022 IUVSTA Scientific and Technical Division Officers

IUVSTA Division

Chair

Vice Chair

Secretary

ASSD - Applied Surface Science

Leszek Markowski

John T. Grant

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BID - Biointerfaces Division

Dmitri Petrovykh

Miguel Manso

Carlos R. Grandini

EMPD - Electronics Materials & Proc.

Ivana Capan

Monika Kwoka

Reinhard Schwarz

NSD - Nanometer Structures

Ana Gomes Silva

Shuji Hasegawa

Carla Bittencourt

PSTD - Plasma Science & Tech.

Satoshi Hamaguchi

Miran Mozetič

Deborah O'Connell

SED - Surface Engineering

Ivan G. Petrov

Peter Schaaf

Monika Jenko

SSD - Surface Science

María Carmen ASENSIO

Mario Rocca

Fumio Komori

TFD - Thin Film

Mile Ivanda

Papken Hovsepian

Diederik Depla

VSTD - Vac. Science & Tech.

Marcelo J. Ferreira

Martin Wüest

Joe Herbert

EC- Education Committee

Alberto Tagliaferro

Ana Silva

Sylve Bourgeois

AGENDA STD ECM-136

1. Opening and Welcome 15:45 CET (5 min)

- Scientific Director's Report (Jay Hendricks)
- Attendance (Katsuyuki Fukutani)
- Adoption of Agenda (all)
- Approval Minutes of previous ECM135 (link below)

https://iuvsta.org/iuvsta2/assets/docs/meantime/ECM_136/STD_minutes_ECM135_20211123.pdf

2. Divisional reports 15:50 CET (20 min, 2 min each report)

- ASSD-Applied Surface Science Division **Leszek Markowski**
- BI-Biointerfaces Division **Dmitri Petrovykh**
- EMPD-Electronic Materials & Processes Division **Ivana Capan**
- NSD-Nanometer Structures Division **Ana Gomes Silva**
- PSTD-Plasma Science & Techniques Division **Satoshi Hamaguchi**
- SED-Surface Engineering Division **Ivan G. Petrov**
- SSD-Surface Science Division **María Carmen ASENSIO**
- TFD-Thin Film Division **Mile Ivanda**
- VSTD-Vacuum Science and Technology Division **Marcelo J. Ferreira**

2. 15:50 CET Division Reports (20 min)

Division/ Reports		Chair	Presenting	Vice Chair	Secretary
ASSD	(2-3 min)	Leszek Markowski	Leszek	John T. Grant	--
BI	(2-3 min)	Dmitri Petrovykh	Dmitri	Miguel Manso	Carlos R. Grandini
EMPD	(2-3 min)	Ivana Capan	Ivana	Monika Kwoka	Reinhard Schwarz
NSD	(2-3 min)	Ana Gomes Silva	Ana	Shuji Hasegawa	Carla Bittencourt
PSTD	(2-3 min)	Satoshi Hamaguchi	Miran	Miran Mozetič	Deborah O'Connell
SED	(2-3 min)	Ivan G. Petrov	Ivan	Peter Schaaf	Monika Jenko
SSD	(2-3 min)	María Carmen ASENSIO	Fumio	Mario Rocca	Fumio Komori
TFD	(2-3 min)	Mile Ivanda	Mile	Papken Hovsepian	Diederik Depla
VSTD	(2-3 min)	Marcelo J. Ferreira	Marcelo	Martin Wüest	Joe Herbert
Education		Alberto Tagliaferro	Alberto @ 15:30 in the EC	Ana Silva	Sylvie Bourgeois

DIVISION REPORTS HERE Katsuyuki to project

3. 16:10 CET Presentation on Past WS/SCH/TTC/SC (5 min each, 10 min total)

Proposal filename	Place/ Country	Date	Organizer (underwriter)	IUVSTA Committee	Presenter	Title	Requested Funding (€)
WS 91	Israel & Virtual	Had 2 parts: 1. Local in-person Feb. 27-28, 2022 2. Virtual March 1-3, 2022	Israel Vacuum Society	NSD	Presenting for Baran: Ana Silva, NSD Chair	“Surface Chemistry of Catalytic Systems” baran.eren@weizmann.ac.il	6000
TTC 22	Islamabad Hotel, Islamabad, Pakistan	Was held In-Person Dec. 7-9, 2021. Islamabad Hotel Website www.pvs.com.pk	Pakistan Vacuum Society	(EC)	Javaid Ahsan Bhatti	“IUVSTA TTC on Vacuum Technology Applications”	2500

Maximum allowed funding (Euro): WS/Sch = 9,000, TCC= 2,500, SC=2,000



4. 16:20 CET Status of existing WS; Scientific Director (3 min)

title	Place/ Country	Status/Date	Organizer (underwriter)	IUVSTA Division	Primary Contact	Title	Requested Funding (€)
WS 90	Spain	Early 2022. hybrid event ? No reply to email ?		SSD	Juan.F.Sanchez@uv.es	“Tuning properties of advanced energy materials using modern theoretical and experimental methods”	6000
WS 92	Okinawa Japan	Satellite of IVC-22 Sept. 19-22, 2022	Japan Society of Vacuum and Surface Science	NSD, SSD	shuji@surface.phys.s.u-tokyo.ac.jp	“Workshop on Advanced Spectroscopy and Transport for 2D Materials at Surfaces”	6000
WS 93	Castle Seggau, Austria	October 2022 in person. The final details will be ironed out during the ICMCTF conference in San Diego in May.	Austrian Vac. Soc.	SE NSD, TFD, ASSD	petrov@illinois.edu	“Advances in the characterization of surface engineering structures, coatings, and thin films”	6000
WS 94	Cerklje na Gorenjskem Slovenia	“Summer 2022 organize it around 1st June as in person workshop ”	Slovenian Vacuum Society	PSTD	Miran Mozetič	“Reliable sensing and control of reactive plasmas”	9000
WS 95	Guimarães Portugal	June 20-23, 2022 as in person workshop https://www.lab4nano.com/home/index.php/95th-iuvsta-workshop	University of Minho	TFD	Joel Borges	“Plasmonic Thin Films: Theory, Synthesis and Applications”	6000

4. 16:20 CET Status of existing Proposals TTC/SC, Scientific Director (2 min)

Title	Place/ Country	Status/Date	Organizer (underwriter)	IUVSTA Committee	Primary Contact	Title	Requested Funding (€)
TTC 21	Štrbské Pleso, Hotel Trigan	"28 oct 2021 ran as virtual. Run again as in-person 2022 possibility combining with JVC if it occurs in SK."	Slovak Vacuum Society	(EC)	Andy Vincze	"Vacuum technology, principles and applications"	2500
SC Low Energy Microscopy	Córdoba, Spain	In person Sep. 26, 2022 in-person https://leempeem1 2.secv.es/	Vacuum Society- Spain	(EC)	miguel.manso @uam.es	"Low Energy and PhotoEmission Electron Microscopy"	1000

Maximum allowed funding (Euro): WS/Sch = 9,000, TCC= 2,500, SC=2,000

4. 16:25 CET Presentations of new SC/TTCs (5 min each 25 min total)

PDF file name	Place/ Country	Status/D ate	Organizer (underwriter)	IUVSTA Committee	Primary Contact	Presenting	Title	Request ed Funding (€)
#1-SC-1	Sapporo Convention Center, Hokkaido, Japan	Proposal	Japan Society of Vacuum and Surface Science	(EC)	Yasunori Tanimoto		8 courses (see proposal)	2,000
#2-SC-2	Hyatt Regency, Minneapolis MN, USA	Proposal	AVS	(EC)	John Grant		SIMS (Secondary Ion Mass Spectrometry) Short Course	2,250
#3-TTC-1	Sorocaba, SP, Brazil	Proposal	Brazilian Vacuum Society	(EC)	Pedro Nascente	Pedro	Vacuum, Plasma, Surfaces, and Thin Films	2,000
#4-TTC-2	Ljubljana, Slovenia	Proposal	Slovenian Vacuum Society	(EC)	Miran Mozetič		Fundamentals of Vacuum Technique and Technologies	2,000
#5-TTC-3	-	Proposal	Spanish Vacuum Society	(EC)	Miguel Manso		Science and Technology of Vacuum	1,100

Maximum allowed funding (Euro): WS/Sch = 9,000, TCC= 2,500, SC=2,000

6. 16:50 CET Questions for Presenters

7. 17:00 CET Voting on TTC/SC proposals (Katsuyuki will record votes for formal proposal to ECM tomorrow)

8. 17:10 CET Open Discussion on IYBSSD 2022; Anouk will lead discussion

9. 17:30 CET Adjourn

Thanks!

Jay Hendricks, Scientific Director, March 25, 2022

Jay Hendricks

Scientific Director, 2019-2022

IUVSTA



National Institute of Standards and
Technology
100 Bureau Drive
Gaithersburg, MD 20899



	WS Workshops	SCH Schools	TCC Technical Training Course	SC Short Course (may adapted to webinar)
Submission:	TO: Scientific Secretary CC: SD + organizers	TO: Scientific Secretary CC: SD + organizers	TO: Scientific Secretary CC: ECC/ECVC/ECS/SD + organizers	TO: Scientific Secretary CC: ECC/ECVC/ECS/SD + organizers
Summary/ Purpose:	To advance scientific knowledge in a field; rather than be educational of existing knowledge	To educate on existing knowledge	To educate at the beginner level , generally not same topic in sequential years	To educate on existing knowledge “state of the art “in a specific field
Organized by/Underwriter	Organized IUVESTA Division(s)/National Vacuum Society or university	Organized IUVESTA Division(s)/National Vacuum Society or university	Organized IUVESTA Division(s)/National Vacuum Society or university	Organized IUVESTA Division(s)/National Vacuum Society or university
Format:	Format should be like that of a “ Gordon Conference ” with no publication of proceedings.	Format is a school with Intense instruction on a specific topic with learning/educational materials provided.	Format Example: Practical vacuum science for the regional technician /engineer	Held in conjunction with existing scientific meeting. Example AVS Short Courses
Location:	Remote location (not large city) in a hotel, hostel, university campus, or small town.	Typically, University campus	Regional	Regional to Main scientific meeting
Size/Duration	40-50 delegates 4-6 days	40-80 students 1 to 2 weeks	Any 1-3 days	any 1-2 days
Participation:	Organizers invite 10-20 talks of International experts	International teaching experts in the field	Regional experts and students	Regional experts and students
Program:	Dominated by single session oral presentations by invited speakers. Lots of unstructured discussion space in program and time for questions (opposite of a conference style with little time for questions).	Intense instruction/school on a specific topic with learning/ educational materials provided often in the form of textbook	Dominated by regional experts in the field and often taught in the local language.	1-2 days held in conjunction with a main scientific meeting.
Funding:	6,000-9,000 Euro	6,000-9,000 Euro	2,500 Euro maximum	2,000 Euro maximum
Language:	Typically, English (French/German permitted)	Typically, English (French/German permitted)	Local/regional language is encouraged	English (French/German permitted), maybe regional if main conference is regional language (unusual).
Approval Route	STD→ECM	STD→ECM	EC→STD→ECM	EC→STD→ECM