

# International Society of Electrochemistry

# Division 1 – Analytical Electrochemistry Annual Report – August 2024

## Agenda:

- 1. Division activities
- 2. Division Officers
- 3. Elections
- 4. Membership

- 5. Meetings & symposia
- 6. Awards
- 7. Division budget
- 8. AOB

# ISE IN THE PROPERTY OF THE PRO

### Division 1 – Analytical Electrochemistry – 2024 report

## **1. Division activities**

# Div. 1 objectives & activities follow those of the ISE

- to advance electrochemical science and technology
- to disseminate scientific and technological knowledge
- to promote international cooperation in electrochemistry
- to maintain a high professional standard among its members

# This is achieved by

- organising & co-organising symposia in Annual and Topical Meetings
- sponsoring meetings organised by related societies
- publishing in Electrochimica Acta, e.g. Special Issues following each AM
- awarding prizes (Early Career Analytical Electrochemistry Prize, ISE-Elsevier Prize for Green Electrochemistry, poster prizes)



### 2. Division Officers 2023-2024

- Chair: Guy DENUAULT (University of Southampton, UK)
- Chair Elect: Maria Cuartero Botia (KTH Royal Institute of Technology, Stockholm, Sweden)
- Past Chair:Luigi Falciola<br/>(Università degli Studi di Milano, Italy)
- Vice-Chairs: Rasa Pauliukaitė (University of Vilnius, Lithuania) Wojciech Nogala (Polish Academy of Sciences, Warsaw, Poland)











#### 2. Division Officers 2023-2024

Luigi

- **Chair: Guy DENUAULT** (University of Southampton, UK)
- **Chair Elect:** Maria Cuartero Botia (KTH Royal Institute of Technology, Stockholm, Swed

**Past Chair:** 

Big thank you to Maria, Rasa, Wojciech & Luigi (Univ















# Next elections for Div. 1, early Oct. 2024

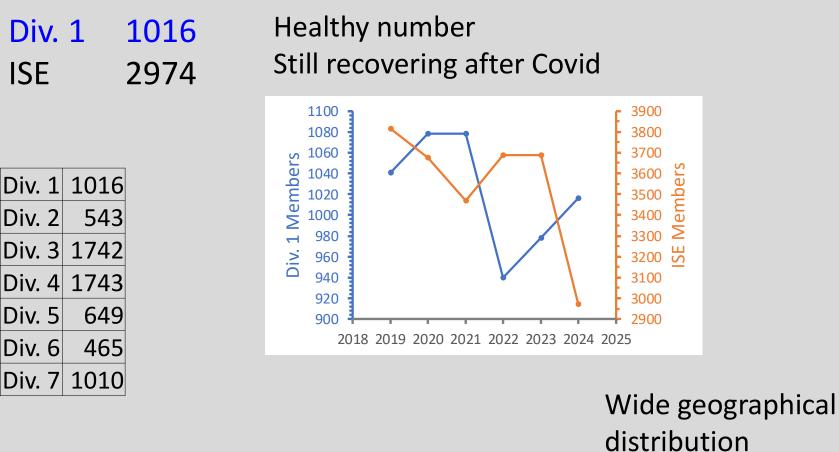
	Chair elect	Chair	Past Chair
<mark>2023</mark>	Maria	Guy	Luigi
<mark>2024</mark>	Maria	Guy	Luigi
<mark>2025</mark>	To be elected	Maria	Guy
<mark>2026</mark>	To be elected	Maria	Guy

Need candidate names asap



for all other ISE matters, e.g., budget, etc.

4. Membership



France	90
Germany	79
United States	65
Canada	59
Italy	53
United Kingdom	47
China	45
Japan	44
Australia	42
Spain	39
Korea, Republic of	35
Poland	34
Brazil	33
South Africa	30
Romania	25
Ireland	20
Croatia	18
Czech Republic	18
Belgium	17
Mexico	16
Switzerland	14
India	13
Sweden	13
Netherlands	12
Chile	11
Finland	11
Taiwan	11
Turkey	11
Portugal	10



5. Meetings & symposia: 2023

# 74<sup>th</sup> AM, Lyon

#### Div. 1 organised

Symp. 1) *Electroanalytical chemistry: from fundamental research to day-today analysis,* Alain Walcarius (Div. 1), Guy Denuault (Div. 1), Damien Arrigan (Div. 1), Florence Geneste (Div. 1)



#### Div. 1 co-organised

Symp. 3) From wearable to sustainable electrochemical sensing and biosensing, Ilaria Palchetti (Div. 2), Elena Ferapontova (Div. 2), Stefano Cinti (Div. 1), Carole Chaix (Div. 2), Pierre Gros (Div. 2)

Symp. 11) *New materials for electroanalysis,* Neso Sojic (Div. 1), Luigi Falciola (Div. 1), Frederic Kanoufi (Div. 4), Magdalena Hromadova (Div. 6)

Div. 1 sponsored 3 poster prizes



## 5. Meetings & symposia: 2023

35<sup>th</sup> TM, Gold Coast, Australia, May 2023

Debbie Silvester-Dean, Huijun Zhao, Chuan Zhao, Yulin Zhong

293 participants

5 Keynotes, 125 oral presentations (19 invited speakers), 130 posters.

#### Div. 1 sponsored 3 poster prize (€ 150 each)

- Mahin Maleki (Deakin University, Australia)
- Sarah Linden (Curtin University, Australia)
- Jawairia Khan (University of Technology Sydney, Australia)







5. Meetings & symposia: 2023

#### Div. 1 also sponsored

ElecNano10, Paris, 10-12 May 2023,

10<sup>th</sup> International Conference on Electrochemistry in Nanosciences: Electrochemistry for Nano & Nano for Electrochemistry

4th European BioSensor Symposium 2023, Aachen, 27-30 Aug. 2023



5. Meetings & symposia: 2024

# 75<sup>th</sup> AM, Montréal, 18-23 Aug. 2024

#### Div. 1 is organising

Symp. 1) *The electroanalytical journey from the fundamental electrochemical concept to the analytical application,* Maria Cuartero Botia (Div. 1), Gaston Crespo (Div. 1), Antonella Badia (local), Christia Brosseau (local)

Symp. 2) Scanning Probe Microscopies: Towards quantitative electrochemistry, Wojciech Nogala (Div. 1), Guy Denuault (Div. 1), Joshua Byers (local), Zhifeng Ding (local)

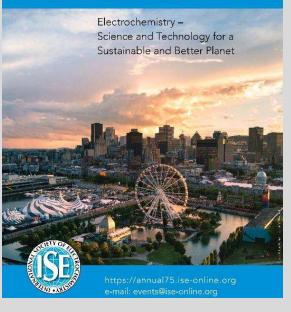
#### Div. 1 is co-organising with Div. 2, 4 & 5

Symp. 3) *Improving health monitoring & pollutant detection using electrochemical sensors,* Silvia Cere, Rasa Pauliukaite (Div. 1), Fabio Cicoira (local), Philippe Dauphi-Ducharme (local)

## 75<sup>th</sup> Annual Meeting

of the International Society of Electrochemistry

18 - 23 August 2024 Montréal, Canada



Online brochure



5. Meetings & symposia: 2024

Div. 1 co-organised

#### 36<sup>th</sup> ISE TM, 26-29 May 2024, Sibenik, Croatia

Marine & Environmental Electrochemistry in the Era of New Technologies

Slađana Strmečki Kos (local), Chair, Marija Marguš (local), Irena Ciglenečki -Jušić (local), Luigi Falciola (Div. 1), Alain Walcarius (Div. 1), Elena Ferapontova (Div. 2), Carlo Santoro (Div. 2)

- electrochemistry in the study of global biogeochemical cycles/processes
- electrochemistry in the identification and monitoring of emerging pollutants
- electrochemistry in the study of nano- and microparticles
- green electrochemistry; advances in the application of electrochemical sensors in the ocean and environment
- emerging electrochemical technologies in environmental remediation of pollutants
- electrochemical marine and environmental microbiology; microbial fuel cells
- corrosion, its control and protection
- electrochemistry in the study of atmospheric processes
- theoretical electrochemistry in marine and environmental research
- electrochemistry in the future; latest innovations and future challenges; artificial intelligence in environmental electrochemical measurement/ monitoring



of the International Society of Electrochemistry



Marine and environmental electrochemistry in the era of new technologies



Call for Papers

http://topical36.ise-online.org

Online program



5. Meetings & symposia: 2024

#### Div. 1 also sponsored

ESEAC2024 19<sup>th</sup> International Conference on Electroanalysis 23-26 July 2024, Ulm, Germany <u>Web site</u>

Journées de Chimie Analytique 2024/ JCA2024 28-30 August 2024, Dschang, Cameroun <u>Web site</u>

AMYC-BIOMED 2024 23-25 September 2024, Rome, Italy Web site

Wearable and Implantable Sensors and Electrochemical Devices (WISED) 27-29 November 2024, Lyon, France Web site

XVIII<sup>th</sup> conference of the French group of bioelectrochemistry (XVIIIth GFB) 15-17 January 2025, Autrans, France <u>Web site</u>

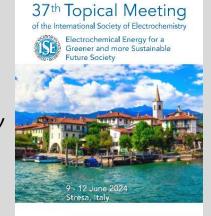
17<sup>th</sup> Dresdner Sensor-Symposium 25-27 November 2024, Dresden, Germany <u>Web site</u>



5. Meetings & symposia: 2024

#### Div. 1 is not involved with

37<sup>th</sup> ISE TM, 9-12 June 2024, Stresa, Italy Electrochemical Energy for a Greener and more Sustainable Future Society



Call for Papers https://topical37.ise-online.org

38<sup>th</sup> ISE TM, 8-11 September 2024, Manchester, UK Nanomaterials in Electrochemistry brochure



38th Topical Meeting

of the International Society of Electrochemistry

Call for Papers https://topical38.ise-online.org



5. Meetings & symposia: 2025

# 76<sup>th</sup> AM, 7-12 September 2025, Mainz, Germany

#### Div. 1 is organising symposium 1

#### *Electroanalysis: From fundamentals towards smart devices*

Guy Denuault (Div. 1), Mauro Bertotti (Div. 1), Frank-Michael Matysik (local), Christine Kranz (local)

and co-organising symposium 13 with Div. 2 & 7

Mechanisms in molecular electrochemistry for (bio-)catalysis, (bio-) sensing and electronics Federico Polo (Div. 1 & 2) Magdaléna Hromadova (Div. 7), Hye Jin Lee (Div. 1, 2 & 7), Valentina Pifferi (Div. 1 & 7), Kristina Tschulik (local).





Insights to Sustainable Technologies

7 - 12 September 2025 Mainz, Germany



https://annual76.ise-online.org events@ise-online.org

Online brochure



5. Meetings & symposia: 2025

Div. 1 is co-organizing

# 40<sup>th</sup> TM, 15-17 August 2025, Changchun, China

Interfacial electrochemistry Xiurong Yang(Chair), Guobao Xu, Erkang Wang, **Neso Sojic (Div. 1), Wojciech Nogala (Div. 1)**, + 2 from Div. 6

Div. 1 is not involved with

# 39<sup>th</sup> TM, 25-27 March 2025, Natal, Brazil

*The role of electrochemistry in sustainable energy and the environment* Lucia Helena Mascaro (local), Carlos A. Martínez-Huitle (local), Rodrigo Muñoz (local) with Div. 3 & 5



## 5. Meetings & symposia: 2026

# **Topical meetings**

- Helsinki, 2026, June 22-25, Div. 3 & 7, *Sustainable Electrochemical Energy Materials: Theory and Practice*
- Belgrade, 2026, June 6-10, Div 4, Corrosion and Surface Modification at the Forefront of 21<sup>st</sup> Century Green Electrochemistry Processes and Technology
- Poznan, 2026, Sept 23-26, Div 3, 2 & 7, *In-situ and operando monitoring of electrified interfaces*



## 5. Meetings & symposia: 2026

# 77<sup>th</sup> AM, Sydney, themes

Electroanalytical chemistry Electrocatalysis Batteries Fuel cells Corrosion Single entity electrochemistry (molecular, analytical, physical) Scanning Probe Electrochemical Microscopy Energy Ammonia Synthesis Hydrogen generation Electrochemiluminescence Photoelectrocatalysis

Minerals electrochemistry Ionic liquid electrochemistry Liquid/liquid electrochemistry Solar cells Microbial electrochemical systems Electrochemistry for medicine/point of care Devices/manufacturing Wearables

Need symposia suggestions asap Symposia list finalised next March



5. Meetings & symposia: 2027

**Topical meetings** 

Please suggest topics and venues for 2027 TM

Annual meetings

• 78<sup>th</sup> AM, 5-10 September 2027, Glasgow,

## 6. Early Career Analytical Electrochemistry Prize of ISE Div. 1 sponsored by OrigaLys

- 2014 Dr Jan Vacek (Palacky Univesity, Olomouc, Czech Republic)
- 2015 **Dr Bryan McCloskey** (University of California, Berkeley, USA) in recognition of his contributions to a highly interdisciplinary teams on understanding the fundamental chemistry of lithium-air batteries
- 2016 Dr Kosuke Ino (Tohoku University, Sendai, Japan) for his research on integrated electrochemical devices based on micro/nanochemistry for bioassays
- 2017 Prof Kristina Tschulik (Ruhr-University, Bochum, Germany) in recognition of her excellent work applying electrochemistry for the physical and chemical characterization of nanostructures and in particular single nanoparticles
- 2018 Dr Maria Cuartero Botia (KTH, Stockholm, Sweden) for her contribution to the electrochemical detection of various species in aquatic systems based mostly on potentiometric methods
- 2019 Prof Sabine Kuss (University of Manitoba, Winnipeg, Canada) for her fundamental contributions to analytical electrochemistry at the interface between electrochemistry and biology













# ISE WILLIAM

## Division 1 – Analytical Electrochemistry – 2024 report

## 6. Early Career Analytical Electrochemistry Prize of ISE Div. 1 sponsored by OrigaLys

- 2020 Dr Cameron Bentley (University of Warwick, Coventry, UK) for his achievements in using nanoscale electrochemistry to understand various phenomena with broad impact in electrocatalysis, materials science and nanoscience
- 2021 Dr Dmitry Momotenko (Carl von Ossietzky University of Oldenburg, Germany) for the development of new advanced instrumental analytical techniques for micro- and nanoscale analyses and for physico-chemical characterization of different materials and particularly for the extensive study of soft probe microelectrodes for SECM and for the integration of this advanced technique with mass spectrometry
- 2022 Dr Stefano Cinti (Università degli Studi di Napoli "Federico II", Italy) for the development of innovative electrochemical sensors (tattoo-sensors, microfluidic paper-based devices and nanomotors) applied to user-friendly analytical chemistry for applications in healthcare (point of care), clinical, pharmaceutical, environmental and agri-food sectors.







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## Division 1 – Analytical Electrochemistry – 2024 report

## 6. Early Career Analytical Electrochemistry Prize of ISE Div. 1 sponsored by OrigaLys

 2023 Dr Paolo Bollella (Bari University, Italy) in recognition of his recent achievements in Analytical Electrochemistry. The Award Selection Committee was impressed by the quality and scale of his contribution to the development of ultrasensitive enzyme-based amperometric sensors for the detection of biomarkers in clinical, food, and environmental samples.

Keynote lecture, Symp. 1, Tue. 14:00,

*From Wearable and Minimally Invasive to Edible Enzyme-based Amperometric Biosensors* 





# The 2024 Early Career Analytical Electrochemistry Prize of ISE Div. 1 sponsored by OrigaLys

Awarded to **Dr Muamer Dervisevic**, Monash University, Australia, for his contribution to the development of transdermal electrochemical biosensors for health care monitoring and diagnostics.

4 candidates

#### **Award Selection Committee**

Florence Lagarde (Analytical Sci. Inst., University of Lyon, nominated by OrigaLys) Rasa Pauliukaite & Guy Denuault (Div. 1 committee)







# The ISE-Elsevier Prize for Green Electrochemistry

Awarded to **Dr Yudong Xue**, EPFL Sion, Switzerland, for his or work on electrochemical solid waste treatment, valuable metal extraction, product engineering and manufacturing of critical metals

8 candidates

**Award Selection Committee** 

Guy Denuault (Div. 1), Thierry Brousse (Div. 3), Carlos Martinez – Huitle (Div. 5)





7. Division budget

TROC

Leftover from 2023	12511€	Few sponsoring requests after Covid. Increasing.
• Sum returning to ISE	8577€	To promote the sponsoring of prizes, meetings, etc., ISE budget rules allow each Div. to transfer up to 2 × the annual allocation to the next year
• 2024 allocation from ISE	4230€	(10k CHF / 7 Div. + 20k CHF / ∑ of all Div. members × number of Div. 1 members) × exchange rate
• Sum available to Div. 1	8915€	In line with previous years



8. Any Other Business

# Any other matter for discussion?

- For AM 2025, dedicated venue, Speakers Corner, available throughout conference for informal discussions (e.g. for early career researchers to cover career development, success and challenges, personalprofessional balance, research team, main research lines, etc.)
- How can we engage with industry?
- Nomination of ISE fellows: Div. can make a collective decision to nominate an ISE fellow



# Thank You

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## Division 1 – Analytical Electrochemistry – 2024 report

## 7. Budget rules

The deduction comes from an ISE budget rules for which, if we do not spend all the amount allocated, part of the sum is deducted (i.e. you cannot save much and should spend as much as possible). You can transfer funds from a year to the next up to a total of 2**S** (see below). This rule was not used in the COVID period since there was no possibility to spend but was reintroduced in 2023. So, we aim to spend what we receive.

The rules are the following:

- 10000 CHF is shared between the 7 divisions: 10000/7 = 1428.57 CHF
- 20000 CHF is shared between the divisions according to the number of members in each division
- The total number of members is larger than the number of ISE members because some are involved in more than one division.
- So, each division receives circa 3.17 CHF per member. (20000 / total number of members)
- Each division receives **S** = 1428.57 CHF + 3.17 CHF × N where N is the number of members in the division

The Division budgets

#### + available funds from 2023 (up to a total of +2S)

+ meeting surplus 3 years with 33.3% of shared surplus from topical meetings

Exception for 2022 & 2023: Exceptions introduced during the pandemic have been lifted.