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13th European SOFC & SOE Forum

22nd Conference in Series with Exhibition & Special Events

3–6 July 2018

Lucerne, Switzerland

Chairs of the Conference

Prof. Ellen Ivers-Tiffée

Dr. André Weber

Karlsruhe Institute of Technology (KIT)

Featuring

■ Science, Technology & Application

Solid Oxide Technologies: Fuel Cells, Electrolysers, Membrane Reactors

■ Exhibition

Suppliers, Materials, Testing, Components & Solid Oxide Technologies and Applications


■ Special Events

Grid Service Markets, Power to X, Utilities & ESCO oriented Business, International Project Meetings, Workshops, Industry Presentations & Tutorials (FC&H₂, EIS)



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EUROPEAN FUEL CELL FORUM forum@efcf.com

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CALL FOR PAPERS

13th European SOFC & SOE FORUM 2018

Solid Oxide Fuel Cells and Electrolysers, including Solid Oxide Membrane Reactors

Chairs of the Conference

Prof. Ellen Ivers-Tiffée

Dr. André Weber

Karlsruhe Institute of Technology (KIT)

Scope of the Forum

www.EFCF.com/Scope

The 13th EUROPEAN SOFC & SOE FORUM 2018 addresses issues of science, engineering, materials, systems, applications and markets for all types of Solid Oxide Fuel Cells (SOFC), Solid Oxide Electrolysers (SOE) and Solid Oxide Membrane Reactors (SOMR). The Forum is the largest international meeting on Solid Oxide Technologies building the bridge from science to application. Business opportunities will be identified for manufacturers, industry, operators and investors. Although a Europe-based event, participants are invited from all continents. About 500 participants and 30 exhibitors are expected. The European Fuel Cell Forum is a leading international meeting place providing an excellent opportunity to present recent technical progress, establish new contacts by networking, and to exchange technical, industrial and business information.

A Scientific Advisory Committee has been formed to evaluate and structure the technical programme. This panel exercises full scientific independence in all technical matters. All papers presented as lectures or posters will be collated in electronic proceedings, which will be made available to all participants at the time of registration. Later a final version will be published with ISBN in the www.EFCF.com/Library. In addition there are plans to assign an individual DOI (Digital Object Identifier) to all contributions. Various other scientific publication possibilities are offered (see Publication Policy). All participants will also receive up-dated programmes of the conference and special events, overview of all contributions, authors, institutions and exhibitors.

Technical Status and Achievements: The following companies have presented in the previous SOFC & SOE edition:

Anan Kasei, AVL, Boeing, Bosal, Bosch Cap Co, Ceraco Ceramic Coating, Ceramtec, Ceramic Powder Technology, CeramTec, Ceres Power, CerPoTech, Convion, EBZ, Elcogen, Fuel Cell Energy/Versa Power, Haldor Topsøe, Hexis/Viessmann, Kerafol, Microsoft, NGK, Nissan, Plansee, Robert, SOLIDpower, Sunfire, Sylfen, ThyssenKrupp, Tokyo Gas

Technical Programme

www.EFCF.com/Conference

The three day technical conference will feature parallel lectures of invited and contributed papers and posters. Care will be taken by the Scientific Advisory Committee to ensure that all presentations are of a high quality. The technical programme will range from fundamental science and new materials, through cell, stack, and system development, to the latest results from commercial deployment. The 2018 **Motto** is:

Progress in Solid Oxide Technologies – From Fundamentals to Systems.

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|---|--------------------------------|
| <ul style="list-style-type: none">• State-of-the-art & novel materials• State of the art & novel manufacturing• Understanding lifetime at different levels: from material to system• Advanced characterisation techniques• Cell, stack & system modelling & optimisation | Science & Know-how |
| <ul style="list-style-type: none">• Cell & stack design & characterisation• Balance of plant components• Design of systems (SOFC, SOE & SOMR)• Component and system performance | Bridge to Product |
| <ul style="list-style-type: none">• Product presentation, demonstration, novel concepts• Solid Oxide Technologies in P2X and chemical processing applications• Status of the industry and major groups• Others such as RCS, Training & Education, Studies, Initiatives | Industrial Achievements |

Publication Policy

www.EFCF.com/PP, www.EFCF.com/Library

All oral and poster presentations are published in Electronic Proceedings distributed to the participants. As in previous years a limited number of contributions will be invited to be included in a Special Issue in the Journal "Fuel Cells – From Fundamentals to Systems" published by Wiley-VCH. The 2012 – 2016 selected papers have been published for reference: EFCF 2014 – Volume 15, Issue 5 Pages 647 ff; EFCF 2016 – Volume 17, Issue 4 Pages 413 ff. The other contributions will be published as open accessible on-line publication with ISBN 978-3-905592-23-8 on www.EFCF.com/LIBRARY (click EFCF Special Issue Series or Proceedings with ISBN).

Authors who do not wish to be included in the ISBN web publication, e.g. due to publication elsewhere, can opt out. The publication opportunities remain completely free for the authors. Final Announcement, programme and registration details are distributed by letter post and announced on www.EFCF.com/FA in March 2018.

Abstract Submission

www.EFCF.com/AuthorCenter

Members of academic institutions, R&D organizations, engineering firms and industry are invited to submit contributions for oral or poster presentation at the 13th EUROPEAN SOFC & SOE FORUM 2018. Technical abstracts dealing with the above topics may be uploaded via the Author Center

The submission procedure is:

1. Download Abstract Template, Instructions & Samples from www.EFCF.com/Download
2. Upload your one-page abstract at www.EFCF.com/Upload by **30 November 2017**
3. Receive notification about acceptance in February 2018. This obligates you to submit a full length manuscript by 30 April 2018, which is a condition to be scheduled as either an oral or poster in the final program.

MISSED the DEADLINE catch the last chance for **ORAL**:
Become directly a **New Author** & inform KIT@efcf.com
when you submit. Evaluation for oral presentation goes on,
POSTER can longer be accepted.

Please consult the time schedule for details of **privileges offered for early registration**. The 13th EUROPEAN SOFC & SOE FORUM 2018 cannot provide financial support to authors of papers. Presenting authors are required to register for the Forum and pay the appropriate registration fee.

Attractive rebates are offered for group registration (starting at just 3 + people), and exhibitors are entitled to up to a 55% rebate on conference fees, and may additionally profit from 'Early Bird' and loyalty discounts on booth fees. If you are interested in presenting your products or services please register for the Exhibition (see below). For Frequently Asked Questions please visit www.EFCF.com/FAQ or email KIT@efcf.com.

Excellent Student Support Fund (ESSF)

www.EFCF.com/ESSF

The ESSF offers support to 3 students **providing first class scientific contributions** in form of **free registration** and a **contribution for accommodation**. To apply students need to fulfil the abstract submission procedure and provide the full length abstract with an application letter including references to prior scientific publications mandatorily by 30 April. The ESSF will evaluate the applications and inform the candidates by middle of May (for details see www.EFCF.com/ESSF).

Time Schedule

www.EFCF.com/Schedule

30 November 2017:	Deadline for submission of abstracts via website – www.EFCF.com/Upload POSTER can longer be accepted
01 March 2018:	All abstracts will be evaluated independently by 3 members of the Scientific Advisory Committee and selected for oral or poster presentation. Authors are personally informed in February 2018. Late abstracts cannot be considered for oral presentation.
15 March 2018:	Deadline for early registration privileges
30 April 2018:	Final Announcement with definitive oral programme as well as up-to-date poster and exhibitor list
	Deadline for regular registration privileges and holding of convenient hotels

Exhibition

www.EFCF.com/Exhibition registration on www.EFCF.com/ByB

Adjacent to the auditorium a Solid Oxide Technology and Application exhibition will be held. SOFC, SOE, SOMR industry and developers, suppliers, equipment providers, research laboratories, ... show their products and services and meet their current and future clients. Book your Booth on-line on www.EFCF.com/ByB

Exhibits:	<ul style="list-style-type: none">• Systems• Prototypes• Related hardware	<ul style="list-style-type: none">• Materials• System components• Stack	<ul style="list-style-type: none">• Control devices• Production technology• Qualification and test benches	<ul style="list-style-type: none">• Diagnostic tools• Research results• and many more
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Forum

Events

www.EFCF.com/Events

3 July 2018	11:00–16:00	Exhibition & poster set-up, 16:00 Opening of Exhibition and Registration, 18:00 "Welcome Reception"
	10:00–17:00	Tutorials: 1. EIS: Electrochemical Impedance Spectroscopy; 2. FC&H ₂ : Fuel Cells & Hydrogen
4 July 2018	09:00–18:00	International and Industrial Overviews – Keynotes – Oral and Poster Sessions, Exhibition
	18:30	"Swiss Surprise Night": An enjoyable exchange event with Swiss cuisine, folklore, culture and drinks.
5 July 2018	09:00–18:00	Keynotes – Oral and Poster Sessions, Exhibition, planned Special Events such as Industry Workshop, Grid Symposium etc.
	19:30	"Dinner on the Lake": A unique pleasure boat tour with music in picturesque scenery, an unforgettable networking event
6 July 2018	09:00–17:00	Oral and Poster Sessions – Plenary Keynotes, Exhibition, Schoenbein Medal Award, Closing Ceremony

Venue

www.EFCF.com/Lucerne

The 13th EUROPEAN SOFC & SOE FORUM 2018 is traditionally held at the Culture and Convention Centre Lucerne (KKL) in conjunction with the Solid Oxide Technology and Supplier Exhibition and the popular FC&H₂ Tutorial. Additionally an EIS Tutorial to Electrochemical Impedance Spectroscopy and additional special events are being organised in the same venue. The KKL conference centre is a well-known location on the picturesque waterfront of the Lake Lucerne, easy to reach from the railway station, and within a short distance from many hotels and the historical town centre.

Fees

www.EFCF.com/Fee

• Students, trainees and unemployed persons etc. with valid identification	580 CHF incl. 8% VAT where applicable
• Members of government, universities, consultants etc.	1280 CHF incl. 8% VAT where applicable
• Members of industry and commerce (incl. 340 CHF donation for student support)	1880 CHF incl. 8% VAT where applicable
• Late charge for registrations from 01 March/01 May 2018/for On-Site registration	120/220/370 CHF incl. 8% VAT where applicable
• EIS Tutorial: Electrochemical Impedance Spectroscopy: Regular (ask for early bird & group rebate)	500 CHF incl. 8% VAT where applicable
For EFCF 2018 participants	100 CHF incl. 8% VAT where applicable
• FC&H ₂ Tutorial: Fuel Cells & Hydrogen: Regular (ask for early bird & group rebate)	500 CHF incl. 8% VAT where applicable

One Swiss Franc ("CHF") is valued at about 0.88 EURO, 1.03 US Dollar, 113 YEN, 6.87 CNY (Aug 2017). The fees include access to **conference** and **exhibition, Conference Proceedings** of the 13th EUROPEAN SOFC & SOE FORUM 2018, **conference bag, business lunches, refreshments, Welcome Reception** on Tuesday with wine and beer and the **Dinner on the Lake** on Thursday (pleasure boat trip on picturesque lake). Optional: Swiss Surprise on Wednesday (120 CHF pp). **Post conference access** to all presentations and available ISBN proceedings back to 1994.

Chairs of the Conference

Karlsruhe Institute of Technology (KIT)



Prof. Ellen Ivers-Tiffée holds the chair of materials for electrical and electronic engineering at the Karlsruhe Institute of Technology (KIT), Germany. After obtaining her PhD in materials science at Erlangen university (Germany) in 1980, she worked at Siemens AG, Corporate Research and Technology, Munich (Germany), where she headed several European SOFC research projects.

In 1996, she became a full professor at Universität Karlsruhe (TH) (now KIT) and has since been head of the Institute of Materials for Electrical and Electronic Engineering. Her research on functional ceramics for the energy sector (namely fuel cells, batteries and gas permeation membranes) focuses on the characterization of electrical & electrochemical reactions and transport processes and on methods of model-based materials development.

Ellen Ivers-Tiffée is a member of both prestigious German national science academies, Leopoldina and acadtech. She is a Fellow of The Electrochemical Society (ECS), a Fellow of the School of Engineering, The University of Tokyo (Japan), and has recently been elected a member of the senate of the German Research Foundation (DFG). She has served the European Fuel Cell Forum for more than a decade as a member of the International Board of Advisors and was awarded the Christian-Friedrich-Schönbein medal in gold (2014).

She holds eleven patents, has published more than 350 peer-reviewed journal papers & conference proceedings and has authored seven book chapters on SOFC topics & impedance spectroscopy.



Dr. André Weber is a senior researcher (Akademischer Oberrat) at the Institute for Applied Materials (IAM-WET) at Karlsruhe Institute of Technology (KIT), Germany, where he heads both the fuel cell and battery research groups. In addition, he acts as scientific manager of the "Fuel Cell Test Laboratory" since 2002, a joint lab of KIT and the European Institute for Energy Research (EIFER), designated for the testing of fuel cell systems.

After studying electrical engineering at RWTH Aachen university and a stay at Siemens Central Research, Munich (Germany), where he became acquainted with Ellen Ivers-Tiffée, he obtained his PhD at Universität Karlsruhe (TH), now KIT, in 2002. During this time he was strongly involved in the establishment of the SOFC group at IAM-WET, he has collaborated with many groups in numerous national, European and international research projects since 2000.

His research is related to the electrical testing and modeling of fuel cells and batteries, with a special emphasis on the detailed characterization by means of electrochemical impedance spectroscopy. The experimental and theoretical work of his research groups ranges from fundamental studies on model systems to the analysis of commercial products, aiming at an understanding of the complex coupling of electrochemical reactions and transport mechanisms in electrochemical devices.

André Weber has authored or co-authored several book chapters, 80 conference proceedings and more than 100 peer-reviewed journal papers on scientific topics related to fuel cells and batteries.

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www.EFCF.com/SAC

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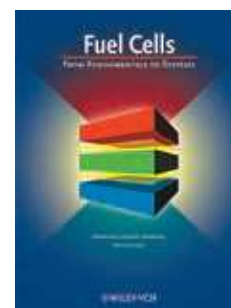
International Board of Advisors

www.EFCF.com/IBoA

13th European SOFC & SOE Forum 3 – 6 July 2018, Lucerne, Switzerland

- This high-level international fuel cell event offers an honest presentation of the state-of-the-art technology in beautiful Switzerland
- Approximately 300 technical contributions with full length manuscripts on USB-stick Proceedings
- Superb conference facilities with excellent services
- Delicious food and refreshments
- Unique networking events: "Welcome Reception", "Swiss Surprise", and "Dinner on the Lake"
- Pleasant walking from hotels to conference centre

International Exhibition of fuel cell products and components.



Organised by the

EUROPEAN FUEL CELL FORUM

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