

Press Release

IAPWS Executive Committee and Working Group Meetings



Bristol, England

29 June – 3 July 2026

Between June 29th and July 3rd, 141 scientists, engineers and guests representing 19 countries met at The Bristol Hotel Conference Centre in Bristol, United Kingdom for the annual meetings of the IAPWS Executive Committee and Working Groups. This series of meetings began in 1929 in London, UK with the purpose to connect scientists and researchers with the industry operators, engineers and managers who use their work. Collaboration and engagement across these varied groups provides guidance to the researchers on topical problems within industry and provides the engineers with the latest research results for direct application in their facilities.

IAPWS produces and releases guidelines on the recommended scientific formulations for physical and chemical properties of water in its various forms as well as technical guidance documents that are the concerted opinion of IAPWS members on the best operating practices for power plant chemistry. IAPWS also documents certified research needs that represent the opinion of experts in their respective fields that a research program is greatly needed to fill a current gap in knowledge. All this information is freely available and can be found on the IAPWS website at www.iapws.org.

On Wednesday 1 July, the 2026 IAPWS Symposium was presented by BIAPWS members and invited speakers. The symposium covered theoretical work and practical experience related to nuclear power generation as well as the latest experiences in the operation of electrode boilers. During the Symposium, the annual Helmholtz award was presented to Dr. Jacy Conrad (Idaho National Laboratory, USA). Dr. Conrad received the award for her major contributions to the thermochemistry of cation ionization and hydrolysis in heavy water under Pressurized Heavy Water nuclear reactor coolant conditions; and to understanding water radiolysis products in nuclear reactor and spent fuel reprocessing environments.



Following the Symposium, a banquet was held on SS Great Britain, the world's first ironclad steam vessel to combine a screw propeller and an iron hull. During the banquet, Dr Andre Anderko was presented with his IAPWS Honorary Fellow Award, originally announced at the 2025 meeting in Dr Anderko's absence. A second IAPWS Honorary Fellow Award was presented to Dr Karsten Meier.



IAPWS, through the various working groups, produces releases and guidelines, technical guidance documents (TGD) and IAPWS certified research needs (ICRN). These can be found for free download on the IAPWS website at www.iapws.org.

The IAPWS Working Group Thermophysical Properties of Water and Steam (TPWS) discussed primarily the development of a new formulation of thermodynamic properties of ordinary water, replacing in future the currently valid IAPWS-95. IAPWS-95 provides an excellent representation of experimental data in most regions, and it has found immense applications in power generation, geophysics, physical chemistry, biochemistry, etc. However, new data, new theoretical knowledge, and new applications require a complete re-design of the formulation. The development of the new formulation has started at Ruhr Universität Bochum, Germany, under the leadership of Prof. Roland Span.

The Subcommittee on Seawater (SCSW) approved a plan of work for the next year including the involvement of the oceanographer community to investigate the possibility of providing traceable measurements of the salinity through density measurements, thanks to the availability of a new hydrostatic weighing with part per million absolute uncertainty. Furthermore, the working group consolidates its bond with industrial partners working in the field of hydrothermal processes.

The Industrial Requirements and Solutions Working Group (IRS) reviewed the progress in the development of a new Industrial Formulation for the properties of water and steam based on the Spline-Based Table Look-up (SBTL) method. The Working Group discussed the roadmap towards a future IAPWS release, including technical aspects of implementation, validation, distribution, and long-term maintenance of the formulation. Significant progress has been achieved in the development of SBTL formulations based on IAPWS-95 for both engineering and CFD applications. To support the next phase of the project, IRS established two

dedicated Task Groups: an SBTL Development Task Group to finalize the formulation, supporting functions, and documentation, and an SBTL Evaluation Task Group to perform independent validation against IAPWS-95 and IAPWS-IF97, including testing in industrial and CFD applications. These activities will provide the basis for a future draft release and represent an important step towards a next-generation industrial standard for fast and accurate water and steam property calculations. The Working Group also reviewed and updated the categorization of industrial requirements addressed by IAPWS and agreed to continue refining the framework to improve the linkage between industrial application needs and future IAPWS activities.

The Physical Chemistry of Aqueous Systems (PCAS) working group expanded its collaboration with the Power Cycle Chemistry (PCC) working group this year, sharing a full day of joint sessions rather than the customary half day, with a program focused on presentations relevant to technical guidance document and guideline revisions. The joint session also featured progress reports from two ongoing IAPWS International Collaborations: one on flow-accelerated corrosion mitigation by film forming amines, and another on the radiation chemistry of iodine. A particular highlight was a theoretical perspective on sorbents providing a foundation for understanding film forming substances in the PCAS-PCC joint session, complemented by a thermodynamics-based contribution in the joint session with the Thermophysical Properties of Water and Steam (TPWS) working group. Additional presentations addressed the adsorption behavior of film forming amines on metal surfaces, the transition from film to dropwise condensation for enhanced heat transfer, and X-ray computed tomography methods for quantifying localized corrosion in steel. Throughout the week, PCAS placed particular emphasis on connecting its discussions to concrete IAPWS outputs, continuing to build the working group's activities and its collaboration across IAPWS. PCAS proposed a new task group to compile electrical conductivity data to address ICRN 32, Conductivity of electrolytes in aqueous solutions, with a longer term goal of developing a fundamental model for limiting conductivity of ions over a wide range of temperatures and pressures.

The Power Cycle Chemistry (PCC) working group once again had strong attendance from many member countries. Highlights of the technical presentations related to PCC activities included: further detailed studies on the reactions of film forming amines; application of the White Paper on corrosion product sampling; and the increasing use of high temperature heat pumps in industrial processes. PCC members benefited greatly from the joint sessions held with members of PCAS. The successful delivery of three PCC webinars was discussed and plans made for a further three webinars in 2026-27. The webinar series has been very successful in promoting the work of IAPWS and PCC to potential members. During the week several task groups met to produce revised drafts of the white papers and technical guidance documents being developed. PCC expects some of these documents to be published by IAPWS prior to the 2027 Annual meeting. All members in attendance contributed to a revision of the PCC priority list – information on the operation of flexible and fast-starting plants remains a key concern for industry around the world.

We were also pleased that Jeff Cooper was able to join us. Jeff has been involved in IAPWS for over 60 years, contributing significantly to the development of the properties of water and steam. His presence was a good reminder of the contributions that can be made at IAPWS.

IAPWS welcomes scientists and engineers with interest in the thermophysical properties of water, steam, and aqueous systems and in the application of such information to industrial uses. The next IAPWS meeting will be held in Potsdam, Germany in September 2027. Further information on meetings can be found at the IAPWS website (www.iapws.org) as it becomes available. People interested in IAPWS documents and activities should contact the chairman of their IAPWS National Committee (see website) or the IAPWS Executive Secretary, Dr. Daniel G. Friend, dg.friend@iapws.org. People do not need to be citizens or residents of member countries to participate.



**Delegates from the IAPWS Symposium, Executive Committee and Working Groups
The Bristol Hotel Conference Centre, Bristol, UK – 1 July 2026**