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Editorial

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The 27th Congress of IFHTSE (The International Federation for Heat Treatment and Surface Engineering) jointly organized by ASMET with the European Conference on Heat Treatment ECHT2022 and supported by the European Heat Treatment Associations A3TS, AIM, ATZK, AWT, SVW and VWT stands for the continuity of a well-established concept of international knowledge exchange on scientific methods and achievements, industrial solutions & applications, and views in the field of Heat Treatment and Surface Engineering.

The idea to host this Congress in Salzburg in 2022 intended to commemorate the 50th anniversary, where the journey of IFHT(SE) formally started with the 1st meeting of its Governing Council on 17th of May 1972, and to celebrate the achievements in international cooperation since. The conference was also the first on-site IFHTSE and ECHT conference since the restriction due to Covid 19 were introduced and the political circumstances reminded of the time of the East-West-Conflict during the foundation of IFHTSE.

The strong interest of the community to share results, to strengthen and extend contacts as well as to learn from each other is documented in more than 100 contributions to this congress and conference from 23 countries around the globe and almost 200 participants. Additional 13 exhibitors took part at the conference and showed the latest developments of their companies to the participants. During the opening ceremony, three outstanding personalities were honored. Prof. Hans-Werner Zoch, former head of the Leibnitz IWT-Bremen and former president of IFHTSE, was awarded the IFHTSE Fellowship, recognizing his leading role in the world of heat treatment. Dr. Zoltán Kolozsváry received the distinction of Honorary President for his service to IFHTSE as former president and long time Treasurer

Prof. R. Schneider (△) University of Applied Sciences Upper Austria, Stelzhamerstraße 23, 4600 Wels, Austria Reinhold.Schneider@fh-wels.at of the society. The IFHTSE Medal was awarded to Prof. John G. Speer from the Colorado School of Mines for his outstanding contribution to the physical metallurgy and development of advanced steels, especially recognizing his role in the invention of the Quenching and Partitioning process. During the closing ceremony, two contributions from Simona Kresser and Pedro José de Castro were honored with the Tom Bell Young Author Award of IFHTSE and four poster awards, sponsored by Burgdorf and Fluxtrol, were presented to researchers from Croatia, India, Japan, and Austria.

The topics of the presentations covered many aspects from modelling and simulation, quenching technology, different techniques of surface treatment, such as carburizing, nitriding and coatings as well as the thermal treatment in combinations with additive manufacturing, and environmental aspects. The focus of ECHT2022 was on the thermal processing of steels in various forms for many different grades. A special symposium in memoriam of Sören Segerberg and his achievements in quenching technology was organized. Two papers from this symposium can be found in this issue. The next two papers cover the important fields of energy and emission reduction in heat treatment and a new approach for the nitriding of aluminum. The final two papers were selected from the award-winning poster contributions, highlighting new achievements in the field of Surface Engineering.

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 $\mbox{\bf Conflict of interest.} \ \ R. \ \ Schneider \ and \ G. \ \ Hackl \ declare \ that \ they have \ no \ competing interests.$

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