

Editorial Foreword

(E50) Issue 50 of the Superconductivity News Forum was preceded by two Previews and so the full Issue contains an impressive number of contributions. Conferences and workshops in the year 2021 were again hampered by the COVID pandemic, and as a result, most were organized as virtual events. Clearly, this had also consequences for the total number of contributions to SNF in 2021.

We publish in this Issue, 15 selected invited presentations of the ‘Virtual Coated Conductors for Applications Workshop 2021’ which took place in October 2021. The goal of this CCA 2021 was to bridge the latest coated conductor materials science technology achievements to various applications. The selected contributions cover the highlights not only of latest materials developments but also of optimized processing and manufacturing technologies to meet the specifications for some essential applications. The various applications, which are selected, range from magnets for particle physics and fusion, as well as for NMR/MRI, to electric power equipment and medical science.

From the CEC-ICMC conference, this Issue contains two important and very interesting plenaries, the plenary of Irfan Siddiqi about “The Promise of Superconducting Quantum Information Processing” and the Plenary of Ludovic Ybanez about “ASCEND – A First Step Towards Cryogenic Electric Propulsion for Aircraft”. Furthermore, we include 7 invited presentations detailing different aspects of superconductivity/cryogenics in electrical airplane propulsion.

In the context of the 20th anniversary of the discovery of the MgB₂ superconductor, we are proud to publish the translated presentation of Jun Akimitsu himself given at the ‘2021 Virtual Spring Meeting of the Cryogenic and Superconductivity Society of Japan’ in May 2021, in which he describes the discovery of MgB₂, its solid-state properties and possible applications. From the same meeting, we include the presentation of Giovanni Grasso of ASG Superconductors who reported on the further development of MgB₂ materials and the current status of applications.

We hope that you will find this Issue informative and timely. As always, you will also find information about conferences and technological highlights in this Issue No. 50 of SNF.

Finally, a personal note: this is the last Issue under my responsibility as Editor-in-Chief of SNF. I would like to thank the readership of SNF for all the years of interest and support, the members of the Editorial Office and especially Jennifir McGillis for the organizational and editorial work keeping the team functioning and making the publications available to the world. SNF would not exist without the cooperation of the International Editorial Board and the Associate Editors, but especially not without the continuous support of IEEE CSC and ESAS in the funding, organization and especially also in the stimulation of our activities. I would especially like to thank Elie Track, John Przybysz, and Bruce Strauss from IEEE CSC, and from the ESAS David Cardwell, Luca Bottura and Giampiero Pepe, and from both worlds, my Italian friend and former IEEE CSC president Antonio della Corte.

I am excited about the prospect to further strengthen the position of the Superconductivity News Forum in the community as we welcome a new Editor-in-Chief, this time an internationally esteemed scientist from the materials side of superconductivity, Xavier Obradors from the ICMAB-CSIC Institute in Barcelona/Spain.

Horst Rogalla and the SNF Editorial Team