

Editorial Foreword

(E51) This full Issue No. 51 of the Superconductivity News Forum has been enhanced with the addition of several new Plenary and Invited talks from several conferences, as well as a new selected highlight paper. The conferences and workshops included were held either in 2021 or 2022, and reflect the transition from the fully virtual format implemented during the height of the COVID pandemic to the current hybrid and in-person events.

SNF Issue No. 51 includes 13 selected plenary / invited presentations from the 8th International Workshop on Numerical Modelling of high Temperature Superconductors (HTS 2022) (hybrid format); the 35th Workshop on Low Temperature Electronics (WOLTE-15) (hybrid format); the 34th International Symposium on Superconductivity (ISS 2021) (virtual format); the 27th International Conference on Magnet Technology (MT 27) (hybrid format); and the 15th European Conference on Applied Superconductivity (EUCAS 2021) (virtual format).

HTS 2022 is a conference devoted to the analysis of the modelling tools required in applied superconductivity. It was held in Nancy (France) and we include two very interesting plenary talks reviewing the present state of energy and magnet applications of HTS.

From WOLTE-15, a conference devoted to semiconducting and superconducting low temperature electronics including quantum technologies, we have selected a tutorial talk by E. DeBenedictis and a keynote presentation given by N. Yoshikawa related to quantum computer scalability and quantum devices.

From ISS 2021, also a virtual conference hosted by AIST (Japan), we include three invited presentations from the electronics sessions devoted to recent advances in different aspects of quantum computing.

MT27 was held as hybrid conference in Fukuoka (Japan) in 2021. We have included four very interesting plenary talks reviewing magnet development for ultra-high field NMR spectrometers, radiation therapy (proton and others), High Energy Physics (Muon colliders) and the JT-60SA fusion installation in Japan.

Finally, we have included two plenary talks delivered in the virtual conference EUCAS 2021 organized by Russian researchers under the auspices of ESAS. The first talk reviews 20 years of single-photon detectors, and the second, the progress in bulk materials and their applications.

Issue No. 51 of SNF also includes a highlight paper reporting the recent achievement of the first superconducting joint of Fe-based superconductors made through a collaboration of several research institutes and Universities from China, and the Editorial Forewords from Horst Rogalla and Xavier Obradors previously published in Preview No. 1 of this Issue.

We hope that you will find the content of SNF Issue No. 51 informative and interesting.

Xavier Obradors and the SNF Editorial Team