

Foreword SNF Issue No. 60

We are pleased to present Issue No. 60 of the Superconductivity News Forum which includes 2 presentations from the **International Superconductive Electronics Conference (ISEC 2025)** celebrated at Erfurt (Germany) in June 2025, 5 presentations made at the **IRradiation Effects on HTS for Fusion (IREF 2025)** celebrated at Gallipoli (Italy) in June 2025 and 14 presentations plus an extended abstract from a plenary talk from the **International Conference on Magnet Technology (MT29)** celebrated at Boston in July 2025.

First of all, from ISEC 2025 we include 1 Plenary and 1 Invited talk in the Electronics category. These were presented by Dr. Lixing You and Dr. D. Scott Holmes, respectively. The topics covered were strip photon detectors and applications in the first case and the status of the DISCoVER expedition in the second case.

From the IREF 2025 conference we include 5 Invited contributions in the Materials category. The presentations were made by Dr. William Illife, Dr. Yasuo Ijima, Dr. Ning Zhang, Dr. Dongliang Gong and Dr. Teresa Puig. The topics of these talks were: the effect of oxygen ion irradiation on the critical currents of coated conductors, the mass production of coated conductors by PLD, the enhancement of critical currents in REBCO films via He-ion irradiation, the impact of irradiation fluence on the performance of coated conductors and the study of irradiation effects on coated conductors.

From the MT29 conference we include 10 Invited presentations, 4 presentations from Special Sessions and 1 extended abstract from a Plenary talk, all of them in Large Scale category. The extended abstract is from Dr. Mohammad Yazdani-Asrami's Plenary presentation that was devoted to "Artificial Intelligence and Machine Learning Techniques for Superconducting Magnets." The Invited presentations were made by Dr. Min Zhang, Dr. Neil Mitchell, Dr. Danko van der Laan, Dr. Eva Cuninkova, Dr. Makoto Takayasu, Dr. Luigi Muzi, Dr. Tommaso Bagni, Dr. Victor Prost, Dr. Rod Badcock and Dr. Pierre Pagnat. The topics of these presentations related to: progress on a propulsion system for zero emission aviation, the Gauss fusion magnet system, development of CORC cables for fusion magnets, properties of striated coated conductor for TORT cables, Rutherford cables for high current and high – field applications, development of SECTor ASsembled cable (SECAS) for fusion, a study on demountable coil technology for fusion power plants, the magnet program of Renaissance Fusion for stellarator magnets, magnet technologies for levitated dipole systems and a review on the progress of the Grenoble Hybrid Magnet which reached 42 T.

From the Special Sessions of MT29, we include 4 presentations from Dr. John Burgoyne, Dr. Erik Schnaubelt, Dr. Daniel Korsun and Dr. Pierre Pagnat, respectively. The topics covered were science discovery with high field magnets, protection and simulation tools for REBCO magnets, analysis of the limits of passive quench protection in non-insulated magnets and a review of the Hybrid Superconducting Resistive Magnet in Grenoble.

Finally, we also include a Memoriam to honor and remember the pioneer of physics of superconductors Dr. Paco de la Cruz from Centro Atómico de Bariloche (Argentina) who passed away recently.

We hope that you will find the content of SNF Issue No. 60 informative and interesting. Remember to periodically check back to the site for continuous updates and announcements.

Xavier Obradors and the SNF Editorial Team