

### Editorial 37-3

July 27, 2016 (E37-3). Issue No. 37 includes two points of emphasis: the Quantum Metrology section, the current field of activity of our new Editor-in-Chief, and Highlights on very-high-field HTS magnets (above 24 tesla field intensity), some pre-announcing work to be reported at [ASC 2016](#).

Of the quantum metrology section we like to especially mention the comprehensive SNF paper on SQUID-based thermometers for millikelvin temperatures by J. Beyer, A. Kirste and T. Schurig, which is an abbreviated version of a chapter intended for publication in the next edition of *Encyclopedia of Applied Physics*. The status and newest advances in Johnson noise thermometry are also the topic of an annotated plenary presentation by Jifeng Hu, given at the TempMeko Symposium ([A341](#)) held from June 26<sup>th</sup> to July 1<sup>st</sup>, 2016, at Zakopane, Poland.

Most recent progress in Josephson voltage standards and especially JAWS is addressed by the extended abstract by Benz, which includes DOI links to original papers, and the annotated presentation by Oliver Kieler given at the QM 2016 (5<sup>th</sup> International Conference on Quantum Metrology) held from May 11<sup>th</sup> to 13<sup>th</sup>, 2016, at Poznań, Poland. Still another area of metrology is covered succinctly in the SNF paper by Kehrt et al. on a Transition Edge Sensor (TES) composite bolometer for Fourier Transform spectroscopy needed for THz power calibration.

Of the SQUID section, we emphasize the potential importance of the paper on SQUID de-fluxing by Matlashov, Semenov and Anderson, the partial preview of ASC 2016 poster presentation 2EPo2E-05. To illustrate why it is important we reprinted with permission the paper on magnetic relaxometry for cancer detection and localization by de Haro et al. The presentation on the prototype module of a SQUID multichannel vector magnetometer system provides additional details to the paper by the same authors published most recently in *Superconductor Science and Technology*.

Finally, this Issue includes the plenary presentation on HTS materials for various applications given by J. Shimoyama at the ICSM 2016 (The 5<sup>th</sup> International Conference on Superconductivity and Magnetism, [A320](#)) held in April 2016 at Fethiye, Turkey.