EDITORIAL

Welcome to Quantum Science and Technology

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EDITORIAL

Welcome to Quantum Science and Technology

Rob Thew
University of Geneva, Group of Applied Physics, Switzerland
Supplementary material for this article is available online

Abstract

Quantum information science and related technologies now involve thousands of researchers worldwide, cutting across physics, chemistry, engineering, bioscience, applied mathematics and computer science, extending from fundamental science to novel applications and industry. This situation defines the scope and mission of Quantum Science and Technology, a new IOP journal serving the interests of this multidisciplinary field by publishing research of the highest quality and impact.

Scope and vision

On behalf of the editorial board and IOP Publishing, I am pleased to announce the opening of Quantum Science and Technology (QST). The scope and characteristics of this new journal have been designed in close collaboration with the community to ensure that it serves the thousands of researchers across academia and industry now working at the cutting edge of what is being referred to as quantum science 2.0. Recent developments, including the €1-billion EU project to boost quantum technologies, reflect the increasing potential for converting quantum physics research into commercial products. QST is being positioned as a top-tier, high-impact publication devoted to a rapidly expanding research area that now has a unique multidisciplinary character. The journal will bridge theory and experiment as well as aspects of both fundamental and applied solid state, condensed matter, quantum optics, atomic physics and materials science, extending to chemistry, biology, engineering and computer science. Guided by my colleagues on an editorial board comprised of leading experts across the field, our aim is for QST to become the journal of choice for researchers and innovators based in both academia and industry who are working in all of these areas.

In addition to research articles reporting new developments that significantly advance the field, QST will also publish focus collections on topics of particular current interest. Early collections during the launch phase will include research in quantum cryptography and networking; quantum sensing and metrology; and a series on quantum computing and simulation. Focus collections will include Review articles that provide a

Figure 1. Snapshot from a video of the launch event for Quantum Science and Technology, which took place at the Bristol Quantum Information Technology (BQIT) workshop.
snapshot of recent progress in a particular field as well as Perspectives that are not only aimed at highlighting novel insights and the wider implications of new research, but also the importance of connecting and maintaining strong ties with industry to help bridge the gap between theoretical and experimental research and applied technologies.

A priority for QST is to provide authors with a very fast but strict peer-review process. To achieve this, every submission is personally overseen by a member of the editorial board who is responsible for referee selection as well as the final editorial decision. In addition to fast publication, we recognize that outreach and achieving wider dissemination of published research is also increasingly important for authors. To meet this demand, QST provides a unique opportunity for authors to showcase the significance of their research to the community by encouraging them to accompany their article with a video abstract aimed at maximizing the reach and visibility of their work. To ensure that our authors can comply with any institutional or funding body requirements for the publication of their work, QST also offers an Open Access option to give authors the choice on how their article can be accessed and reused by readers.

I am confident that these key journal characteristics combined with IOP Publishing’s long-standing commitment and reputation as a leading society publisher, will ensure that QST quickly becomes an essential title for this growing multidisciplinary field. The launch reception for QST at the Bristol Quantum Information Technology (BQIT:16) workshop was a terrific success, with almost 100 members of the quantum research and technology communities celebrating at the Bristol Museum & Art Gallery in April this year. You can hear a little more about the reception as well as the aims and aspirations of the journal from the video included here, which features attendees as well as my colleague on the editorial board, Andrea Morello (see figure 1).

Finally, as part of the initial launch phase, all content in the journal will be free to read for individual users, universities and academic research institutes throughout 2016. I hope that you enjoy reading our first content and that you will consider Quantum Science and Technology for your own future research.