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Superconductivity Global Alliance (ScGA): Enabling the Next Generation of Magnets for a Sustainable Future

Ziad Melhem
Oxford Quantum Solutions Ltd., Oxford, UK

E-mail: ziad.melhem@oxqsol.com

***Abstract*–Superconducting technologies are ready to be scaled up and deployed in diverse applications beyond their present usage (MRI, NMR, and physical sciences and research). Superconductivity has the potential to provide means towards zero-emission targets, enabling extensive usage of wind power generation, facilitating zero-emission transportation, enabling fusion power, new medical diagnosis and therapy tools, and new scientific breakthroughs.**

To realise the potential of superconductors in addressing our societal future needs as identified in the United Nations' 17 Sustainable Development Goals (SDGs), also called the Global Goals; will require, among other things, the development of new partnerships and alliances to accelerate the development of commercial superconducting magnets and solutions for diverse sectors.

This session will review the progress of the Superconducting Global Alliance (ScGA) initiative for a Greener, Healthier, more Prosperous, and Sustainable Future. Proposed roadmaps will be presented for identified smart markets in healthcare, big science, industrial, and energy sectors followed by a panel discussion on the ScGA's role in addressing the Global Development Goals.

***Keywords (Index Terms)*– Superconductivity, Net-Zero Carbon Emissions, Superconductivity Global Alliance, Sustainability, Superconductivity for the Future, Magnets, Electrification, Science Discovery, Renewables, Healthcare, Fusion**

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