

**From High-temperature Superconductivity to Room-temperature Superconductivity:  
From Ambient Pressure to Very High Pressure**

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***Abstract***—The exciting history of the search for and study of high-temperature superconductivity (HTS) with  $T_c$  above 77 K (~1987-2023) and room-temperature superconductivity (RTS) with  $T_c$  above 200 K (~2005-2023) will be briefly reviewed, and the impressive achievements in these two periods will be summarized. The promises and challenges that will enable HTS and RTS to change the world as envisioned will be presented and critically discussed.

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