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Volume 53 of Reviews in Mineralogy and Geochemistry covers the most important aspects of zircon-related research over the past twenty-years and highlight possible future research avenues. The chapters review the structure of zircon and other mineral (and synthetic) phases with the zircon structure; the minor and trace element compositions of igneous, metamorphic and hydrothermal zircons; the study of melt inclusions in zircon; experimental and natural studies of zircon saturation and the use of zircon saturation thermometry for natural rocks; cation diffusion and oxygen diffusion in zircon; the historical development of zircon geochronology from the mid-1950s to the present; ID-TIMS, SIMS and ICP-MS; the application of zircon chronology in constraining sediment provenance and the calibration of the geologic time-scale; other isotopic systematics; the spectroscopy of zircon, both crystalline and metamict and an atlas of internal textures of zircon.
