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Sommario/riassunto

The present book reports recent contributions from research in the field of quartz and other silica minerals. The various forms of silica (SiO2) represent important constituents of the Earth crust and play a central role in the composition of geological materials. In particular, quartz is widely used as a raw material in numerous industrial sectors. The knowledge of the formation and specific properties of SiO2 rocks and minerals is indispensable for the understanding and reconstruction of geological processes, as well as for specific technical applications. The works presented in this book are contributed by leading scientists and deal with aspects of the formation and processing of SiO2 raw materials, the analysis of high-purity quartz, and the specifics and varieties (e.g., quartz, amethyst, opal, agate) of SiO2 modifications. The presentations cover the main interrelations between theoretical, analytical, and industrial studies and provide information concerning recent developments in the research on SiO2 materials.