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Sommario/riassunto	Borate crystals are attractive for different technological applications

because of their favorable physical and chemical properties like stability and high transparency, both high thermal and non-linear optical coefficients, making them ideal active media for highly efficient solid state lasers. In this Special Issue, different aspects of multifunctional borate crystals are discussed, including ortho- and oxyorthoborates and compounds with condensed anions, as well as their nonlinear optical and laser properties and piezoelectric characteristics. For this reason, complex investigations of the phase relationships in multi-component borate melts, the study of crystal growth conditions of novel high-temperature borates, and the development of the "crystallization conditions, composition, structure, and properties" concept will provide a scientific basis for growth technologies of high performance electronic and optical devices and components with a variety of industrial, medical and many other applications. In the meantime, these relationships can help to estimate the affinity of synthetic borate materials with their natural prototypes and structural analogues.