Crystal Growth Laboratory

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Over a decade ago, the Crystal Growth Laboratory has developed, and is still improving, a new technology of growing high quality KTP (KTiOPO$_4$) crystals and their isomorphs belonging to the KTP-family of high-temperature ferroelectric compounds. All KTP-family crystals exhibit large optical nonlinearity, high laser damage threshold and excellent thermal stability. These properties make them an important class of materials for application in laser systems utilizing frequency conversion, such as SHG and optical parametric oscillations (OPO), including periodically poled structures. They have also high electro-optic coefficients that are suitable for electro-optic amplitude modulation and Q-switching.

The developed modified top-seeded solution growth techniques with pulling on oriented seeds below 1100°C yield highly stoichiometric KTP crystals of exceptional optical uniformity for high-power applications.

You are invited to visit a website of Raicol Crystals Ltd., a hi-tech company which is a leading manufacturer of nonlinear optical materials and devices. Raicol Crystals Ltd. was established on the basis of technological know-how developed by experts of the College's Crystal Growth Laboratory.