

CRYSTAL GROWTH AT THE CRYSTAL GROWTH LAB IN MADRID: PROGRESS IN CZT AND CZST VGF GROWN CRYSTALS

MONDAY 29 JANUARY 2024

BY

JOSÉ LUIS PLAZA

ASSOCIATE PROFESSOR AND DIRECTOR OF THE CRYSTAL GROWTH LABORATORY IN MADRID

CRYSTAL GROWTH LABORATORY, UNIVERSIDAD AUTÓNOMA DE MADRID, MADRID, SPAIN

Joseluis.plaza@uam.es

Abstract.

In this talk I will briefly introduce the landscape of our present activity at the Crystal Growth Laboratory, which has a long tradition in crystal growth science and technology since the early 1960's.

During the first part of my talk, I will briefly introduce our home-made crystal growth capabilities such as Czochralski, Bridgman, VGF and solution equipments as well as our processing capabilities in terms of cutting and polishing.

I will also present the main crystals we are working in nowadays, as nonlinear, laser and scintillator crystals such as: LiNbO_3 , $\text{Li}_2\text{B}_4\text{O}_7$, ZnWO_4 , KDP and also semiconductors for photovoltaic and radiation detector applications: Silicon, GaSb, CdTe and CZT.

I will especially be focused on our recent progress in CdZnTe and CdZnSeTe VGF grown crystals for gamma and X-ray detector applications.