Antoni Dabkowski

„Growth from melt”

Antoni Dąbkowski is a Research Scientist in Brockhouse Institute for Materials Research (BIMR), McMaster University (Hamilton, Ontario, Canada) where he is involved in crystal growth. He graduated form Warsaw University (M.Sc. in Physics) and Institute of Physics, Polish Academy of Sciences (PhD in Physics) where he started his career in crystal growth.

He has long time experience in crystal growth of mostly oxide materials by various techniques - the Czochralski, Bridgman, Directional Solidification, High Temperature Solution Growth (including Top Seeding and Gradient Freeze), Optical Floating Zone and Travelling Solvent Floating Zone. He was also growing large quantities of thin films of magnetic garnets of various composition using Liquid Phase Epitaxy. He was working with the wide range of materials - magnetics, high temperature superconductors (cuprates), conducting oxides, piezo- and ferroelelctric perovskites (including relaxor type), aluminosilicates. A big part of his interest was related to creating substrates for thin films - (cuprates, relaxors and conducting oxides) and to investigating the influence of lattice mismatch and film-substrate interface on film properties.

Additionally Dr. Dąbkowski was involved in numerous technical projects - design, improvements, modifications and computerization of crystal growth systems and apparatuses. He also consults on solving problems related to crystal growth.

His work in BIMR involves students, graduate students and postdocs and Antoni Dąbkowski is deeply involved in directing, advising, consulting and helping them not only in their tasks of crystal growth but also in crystal characterization and preparation of samples for various experiments. He initiated series of crystal growth tutorials for students involved in crystal growth laboratory and actively participated in BIMR Crystal Growth School as a lecturer and experiments instructor.

Antoni Dąbkowski is active in crystal growth community (as a co-chair and co-organizer of sessions in American and International Conferences on Crystal Growth). He also provides articles review for crystal growth related journals.

He is an author and co-author of about 60 original peer reviewed research papers, and of 3 book chapters related to crystal growth and oxide characterization.