MATERIALS SCIENCE AND TECHNOLOGY

Polymeric composites containing bioactive glasses

Funded By	Politecnico di TORINO [P.iva/CF:00518460019]
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Context of the research activity	Many composite materials have been developed for biomedical applications. Bioactive glasses (BGs), eventually doped with therapeutic elements, can regenerate bone and soft connective tissues. However, their brittleness limits their use in load-bearing applications. For this reason, BGs have been used as constituents in composites. The aim of this PhD is to properly design polymeric composites to be exploited in the presence of BGs.
Objectives	Within this frame, in the PhD Thesis bio-based polymeric matrices will be developed and reinforced with BGs. The environmental friendly tehcnique of photopolymerization will be used to prepare the composites.The achieved composites will be fully characterized in term of their mechanical and visco-elastic properties as well as cytotoxicity and bio-activity.
Skills and competencies for the development of the activity	The proper candidate should have background in Polymeric materials and composites, their preparation and characterization.