

Editorial

Symposium on Bioceramics

High-tech ceramics and glass-ceramics find a broad range of clinical applications today, such as total hip replacements, heart valves, dental implants and restorations, bone void fillers, cements and scaffolds for tissue engineering. Ceramic particles and microspheres are also emerging fast for the radiotherapy of cancers. The socio-economical impact of bioceramics is important: because of the generalized aging of European and American populations and the search for an improved quality of life, the implantation of prostheses and artificial devices is more and more common. For example, in Europe, more than 1 million patients receive each year an orthopaedic device with a ceramic component. More than 2 billion Euros are devoted to orthopaedics, and the market grows by 5% yearly. Europe has a leading position in the field of bioceramics, with some of the largest companies and leading academic groups. The European Ceramic Society recognized the importance of this growing field by organizing a symposium on bioceramics for the 5th time in Stockholm.

The aim of the bioceramics symposium was to review the current state of the art and new findings in the field of ceramics for orthopaedic, neurosurgical, dental, cardiovascular and cancer treatments. The position of ceramics in a gradual medical approach, from tissue regeneration to conventional

implants, was discussed. New approaches to material design, processing and characterization, including in vitro and in vivo studies, on new compositions with improved properties or surface modifications were presented. The symposium offered a forum to present and discuss the most recent advancement in bioceramics, including bioactive glasses and hybrid composites and their clinical applications, bringing together materials scientists, biologists, pharmacists, tissue engineers and medical doctors.

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