
*Symposium 6: ESB-SIB (Italian Biomaterials Society) - IPCS (International Plasma Chemistry Society) - ISPM (International Society for Plasma Medicine)
joint symposium*

ADVANCED PLASMA PROCESSES FOR BIOMEDICAL APPLICATIONS

With the patronage of the Italian Society of Biomaterials (SIB), International Plasma Chemistry Society (IPCS), International Society for Plasma Medicine (ISPM).

Organizers

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Chair

Pietro Favia, University of Bari, Italy, pietro.favia@uniba.it
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Theme

Non-equilibrium electrical discharges in gases (recently, also in liquids), known as also Cold Plasmas, can be ignited at low and at atmospheric pressure. Since decades these systems result extremely appealing for research and applications in the biomedical field. Established applications of Cold Plasmas ranges from tailoring biological relevant surface properties of biomaterials with no alteration of the bulk (hydrophilic/phobic character, cytocompatibility, bacterial-repellence, functionalization with chemical/biological moieties, etc.) to the sterilization of materials. Recent advances include the therapeutic uses of cold plasmas in direct contact with living tissues for wound healing, surgery, dentistry and cancer treatments. This ESB symposium includes: a tutorial introduction on Cold Plasma processes for Biomedical Applications by the chairs, three invited talks delivered by well known experts, four regular talks and posters.

Invited Speakers

Tutorial (15') : Cold Plasmas for Biomedical Applications

Vittorio Colombo, University of Bologna, Italy, vittorio.colombo@unibo.it
Pietro Favia, University of Bari, Italy, pietro.favia@uniba.it

Invited Talk 1 (25') : Plasma Medicine Applications

Steffen Emmert, University Medical Center Rostock, Germany, steffen.emmert@med.uni-rostock.de

Invited Talk 2 (25') : Plasma-Based Surface Modification Processes for Biomedical Applications

Michel Wertheimer, École Polytechnique, Montreal, Canada

Invited Talk 3 (25') : Plasma-based nano-coatings for medical devices and health

Diego Mantovani, Laval University, Canada

Invited Talk 4 (25') : Plasma strategies for treating wounds: cell delivery sheets and direct plasma

Prof. Rob Short, Lancaster University, United Kingdom

Invited Talk 5 (25') : A Challenge of Plasma Activated Medium to the Medical Care

Prof. Masaru Hori, Nagoya University, Japan