



UPO UNIVERSITÀ DEL PIEMONTE ORIENTALE
DIPARTIMENTO DI SCIENZE E INNOVAZIONE TECNOLOGICA

EVENTI DiSIT

Seminario

18-11-2022

14:00-15:00

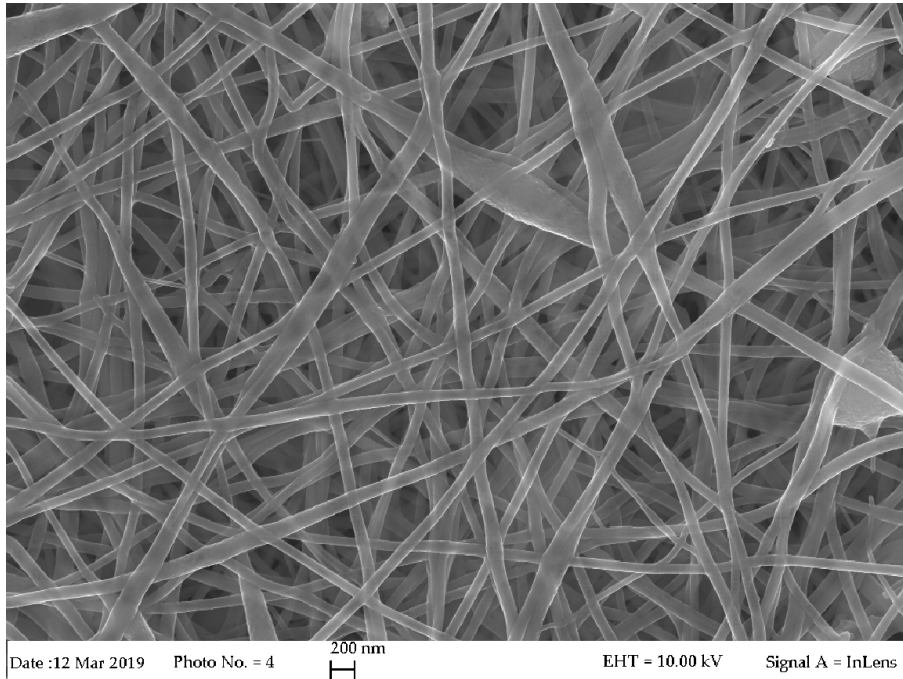
AULA 205

BIOPOLYMER MEMBRANES OBTAINED BY ELECTROSPINNING PROCESS

[Prof.ssa Silvia Vicini](#)

Department of Chemistry and Industrial Chemistry, University of Genoa





Over the last years electrospinning technique has emerged as an easy, fast and affordable approach to prepare nanofibrous membranes with a micro-structure which strongly resemble the extra-cellular matrix.

Electrospinning is based on the application of a strong potential difference to create an electrically charged polymer solution jet which leads to the formation of nano and/or microfibrils subsequently collected on a proper surface; thus, highly porous mats with a high specific surface area can be easily obtained and, above all, they were found able to promote human cell viability.

Alginate and chitosan-based membranes are prepared via electrospinning using solution and poly(ethylene oxide) as co-spinning agent. Different solutions are rheologically characterized in order to assess the viscosity values suitable to proceed with the electrospinning process.

The membranes are coagulated to stabilize them using different baths. Moreover, a crosslinking approach are optimized to obtain insoluble mats whose composition is investigated, proving the elimination of the co-spinning agent. Mechanical characterization is performed to test the stress/strain behaviour.

EVENTO APERTO A:

Docenti, Borsisti, Assegnisti, Dottorandi, Studenti, Esterni UNIUPO

SEMINARIO IN LINGUA: ITALIANO

