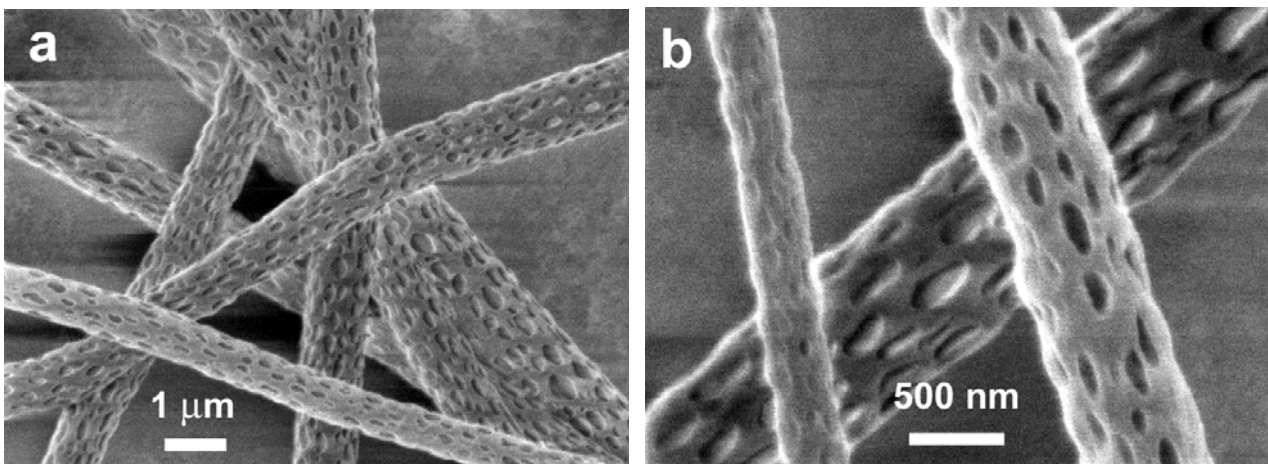


## Novel drug delivery system

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The electrospinning process has been invented in 1934 and has gained interest again during the last decade. Many novel applications of electrospinning and novel materials created by electrospinning have been studied and are on the market today. As of today the novel properties of the material has been the main focus of interest in this area of research. Only lately the structure of the created fibers has been investigated as well.

The description of porous fibers led to the idea to use these fibers as kind of delivery system for drugs. During this project the students will produce porous fibers by electrospinning, characterize them and coelectrospin them with an Antimicrobial peptide. Furthermore these doted fibers will be investigated for their release kinetics of the AMP. The release of AMP will be monitored in the presence of different bacteria and microbiological assays (determination of CFU). The killing of bacteria can also be followed by fluorescence microscopy and AFM.



SEM images of PLLA fibers created by electrospinning.