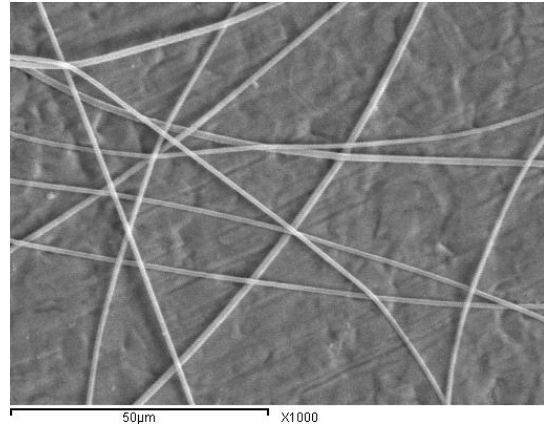


## Nanofibers by electrospinning

Nanofibers are fibers with a very thin diameter. Diameters as small as 10 nm can be produced with the method of electrospinning. At the department of macromolecular chemistry, University in Marburg, Germany, pesticide enriched nanofibers are applied to plants. The nanostructure has potential to reduce the amount of pesticides. One application of nanofiber mats is as filtration material e.g. in cigarettes. Many groups investigate nanofibers as tissue for bones etc. Because of the high surface area, cell are expected to grow faster on such tissue. Further applications could be in the field of sensors, photovoltaic devices or microelectronic devices.



**How the fibers are produced?** A polymer solution is filled in a syringe. Then, a high voltage of about 20 kV is applied between the syringe and the collector. The collector is at a distance of about 15 cm. The figure shows Polymethylmethacrylate (PMMA) fibers produced at GUC.

Several Bachelor and Master projects were conducted in this field in cooperation with the Engineering Material Science Department and with Pharmacy and Biotechnology.

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