

Supplementary Information

Self-similar Omniphobic Coatings of Electrospun Fluorinated Nanocomposites

Alexander Davis,^{} Elisa Mele,[‡] José Alejandro Heredia-Guerrero, Ilker S. Bayer,^{*}*

and Athanassia Athanassiou^{}*

^aSmart Materials, Nanophysics, Istituto Italiano di Tecnologia, Genoa, 16163, Italy

[‡]Present Address: Department of Materials, Loughborough University, Loughborough, Leicestershire
LE11 3TU, UK

^{*}Email: alexander.davis@iit.it; ilker.bayer@iit.it; athanassia.athanassiou@iit.it

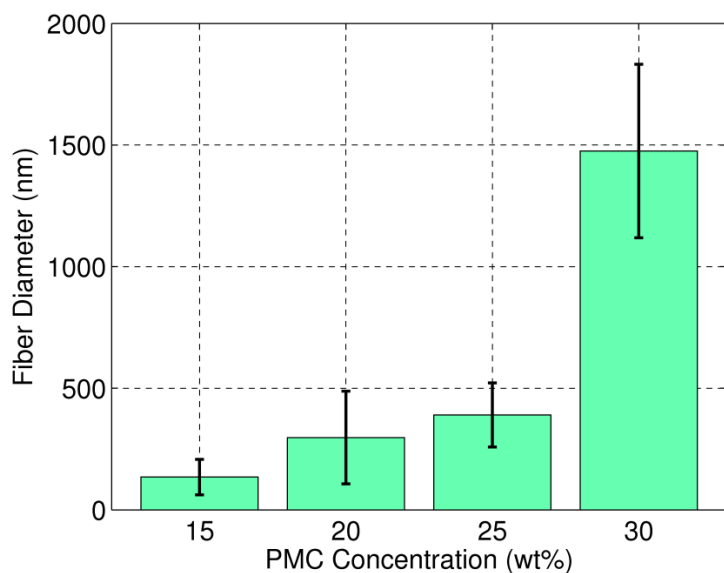


Fig S1. Mean fiber width as a function of PMC wt%. To calculate mean fiber width, the width of 20 different fibers was measured and averaged. Error bars extend to minimum and maximum measured.

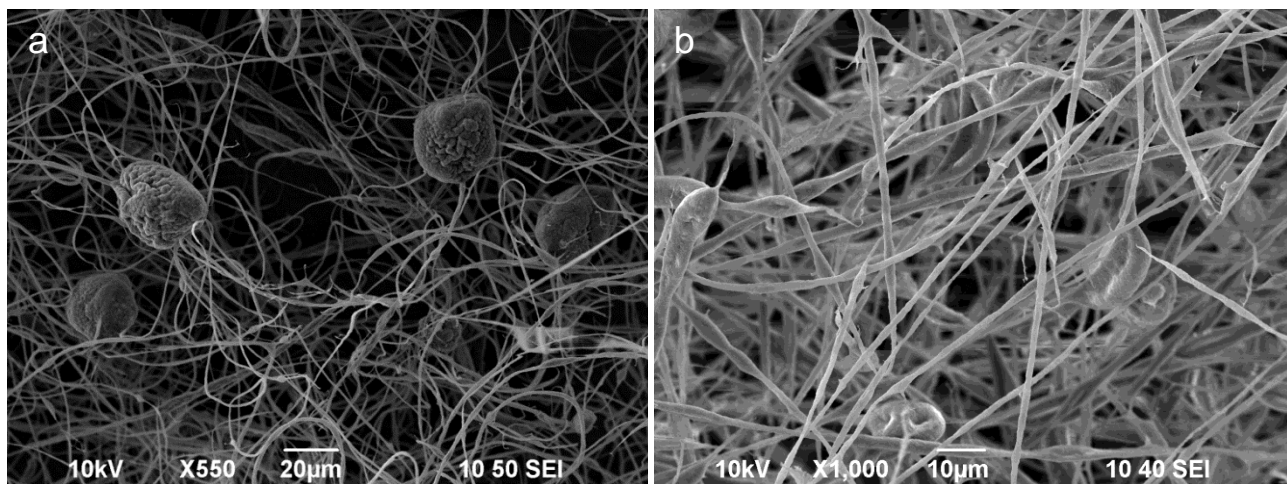


Fig S2. (a) SEM image of PMC/SiO₂ composite nanofibers produced when using 3000 μL/hr solution injection rate. Due to the relatively high rate, nanoparticles were not well dispersed in the polymer matrix and aggregated outside of the fibers. (b) SEM image of fibers produced when 7:1 PMC:SiO₂ ratio, with significant beads and other deviations from the desired fiber structure observed.

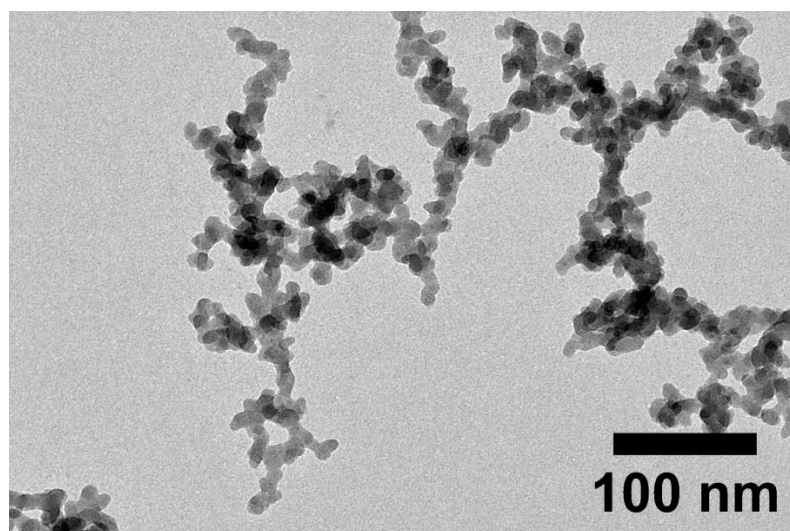


Fig S3. TEM micrograph of Aerosil R812 fumed silicon dioxide nanoparticles.

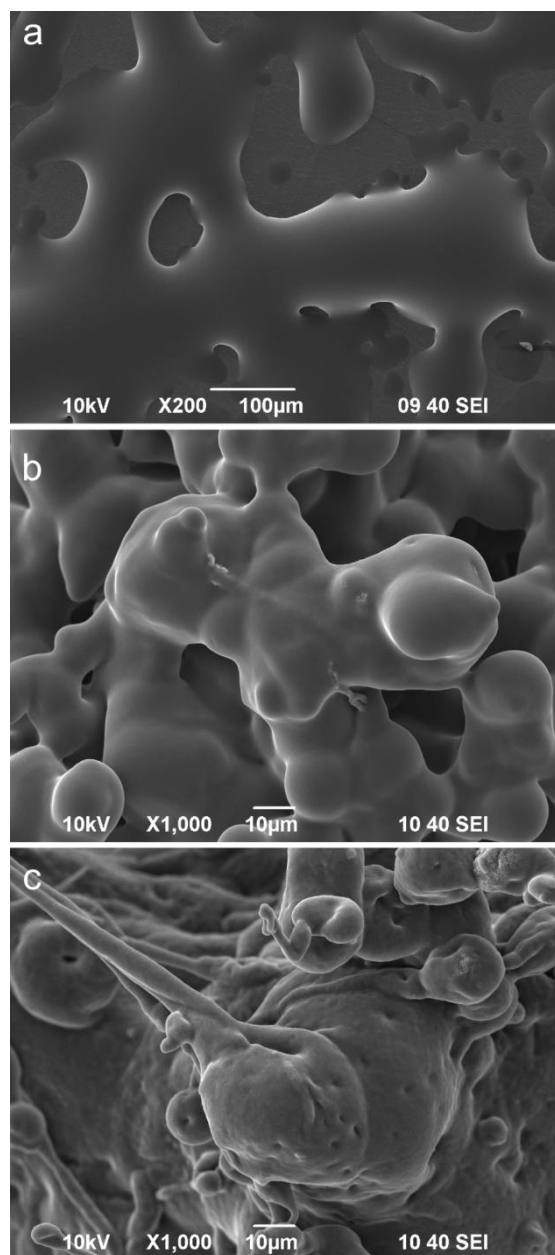


Fig S4. SEM images of surfaces made by spray-casting a) 0 wt% SiO₂ (PMC only), b) 20:1 PMC:SiO₂, and c) 10:1 PMC:SiO₂ solutions in acetone.