

Supplementary Information

Solvent-free electrospinning of UV curable polymer microfibers

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Followings are the different kinds of materials fabricated by UV curable solvent-free e-spinning method.

S1. Color DR-U301 (PUA) fibers were fabricated by this solvent-free e-spinning method by adding different dyes into the precursor solutions.

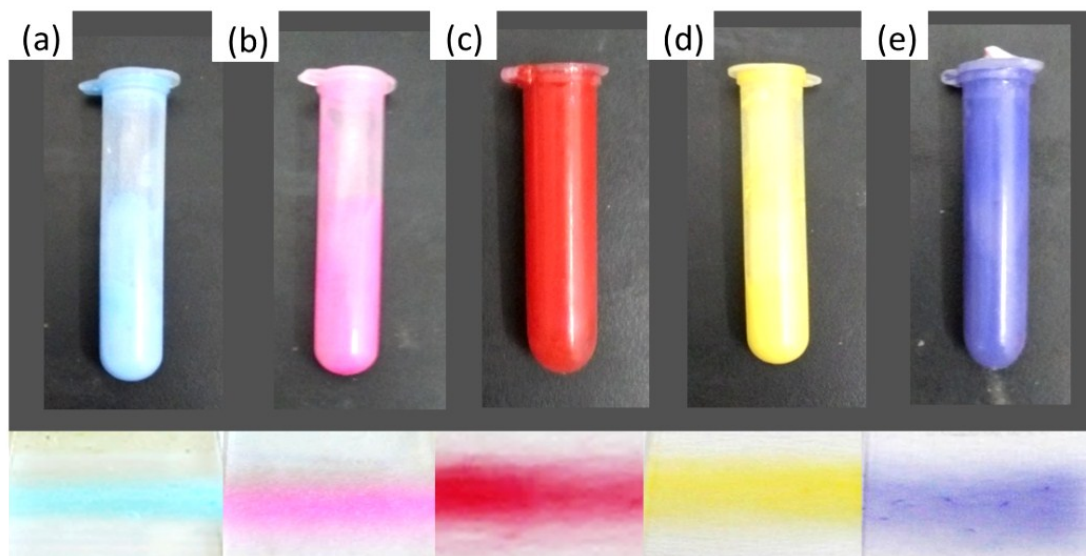


Fig. S1 Digital images of the colorful ultrathin DR-U301 fibers electrospun from the colorful precursor solutions: (a) blue, (b) pink, (c) red, (d) yellow, and (e) purple, respectively. The applied spinning voltage was 30 kV and the rotating speed of collector drum was 280 rpm.

S2. Electrical conductive DR-U301 fibers were fabricated by this solvent-free e-spinning method by adding conducting polyaniline into the precursor solution.

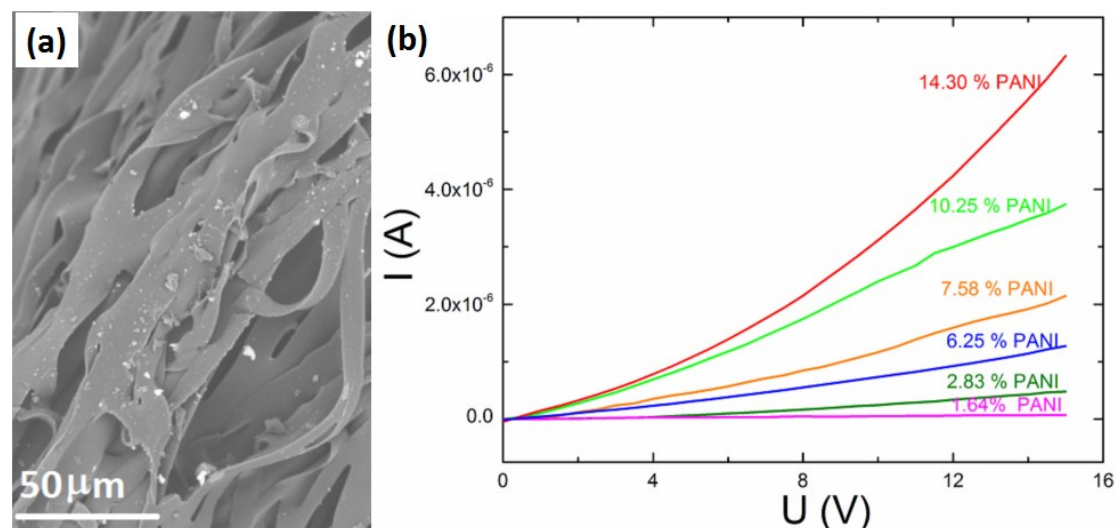


Fig. S2 (a) SEM image of the electrical conductive DR-U301 fibers (belts) electrospun from the precursor solution doped with conducting polyaniline (PANI). The applied spinning voltage was 30 kV and the rotating speed of collector drum was 280 rpm. (b) Current-voltage (I-V) curves of the composite DR-U301 fibers with different PANI concentrations of 1.64, 2.83, 6.25, 7.58, 10.25, and 14.30 wt%, measured at room temperature.

S3. Magnetic DR-U301 fibers were fabricated by this solvent-free e-spinning method by adding magnetic Fe_2O_3 nanoparticles into the precursor solution.

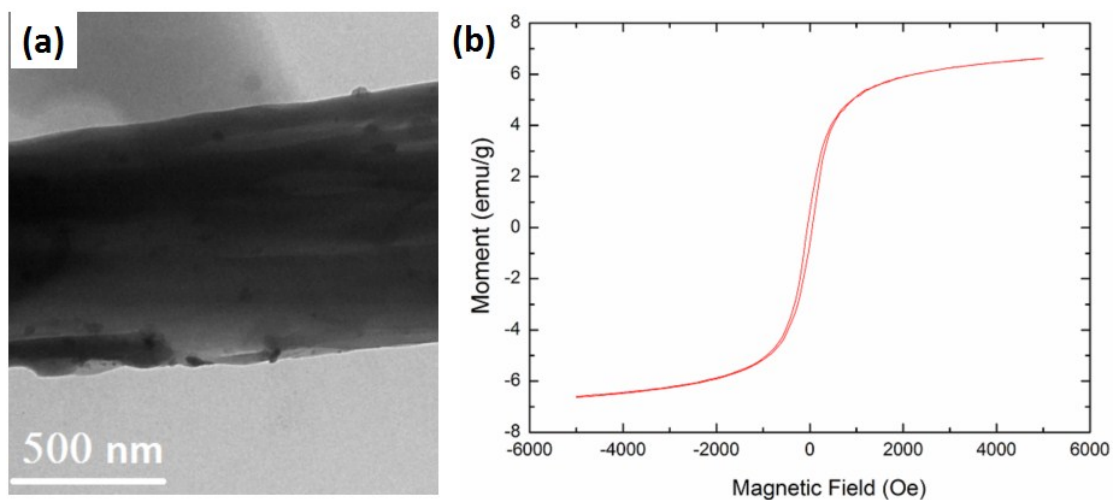


Fig. S3 (a) TEM image of the magnetic DR-U301 fibers electrospun from the precursor solution doped with Fe_2O_3 nanoparticles. The applied spinning voltage was 30 kV and the rotating speed of collector drum was 280 rpm. (b) Magnetization versus applied magnetic field plot at room temperature for the magnetic composite fibers.