Electrospinning

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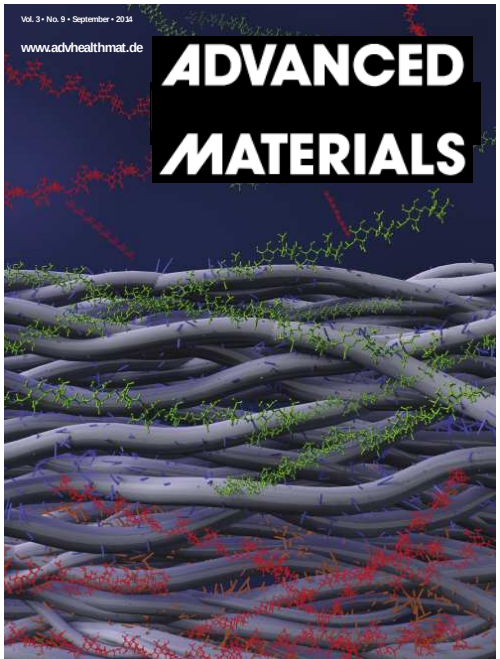
UK Regenerative Medicine Platform



Electrospinner system currently in production and cover image of recent work demonstrating ability to create electrospun scaffolds with peptide gradients to guide biomolecule organisation

Chow LW, Armgarth A, St-Pierre JP, Bertazzo S, Gentilini C, Aurisicchio C, McCullen SD, Steele JAM, and Stevens MM. *Adv Healthc Mat,* 2014, 3: 1381.

What is it?

Applying an electrical charge to a polymer solution to create nanofibrous scaffolds

Strengths

- Tunable fiber diameter
- Fast and reproducible
- Multiple polymers and protein options

Weaknesses

- Currently building an improved system with environment control
- Thickness of scaffolds
- Cell penetration

Potential Applications

- Create scaffolds with peptide gradients to control biomolecule accumulation and cellular adhesion
- Nanofiber scaffolds for Bruch's Membrane