

Manchester Regenerative Medicine Network and Division of CMBRM Seminar

Friday 22nd April at 13:00

Zoom Link: <https://zoom.us/j/91660317157>

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Complex Tissue Engineering by Harnessing Biological Organization Principles

Living systems have evolved to grow and heal through “biological organization principles” (BOPs) capable of organizing molecular and cellular building-blocks at multiple size scales. These BOPs emerge from cooperative interactions and chemical networks between multiple components, which allow biological systems to diversify, respond, and optimize. This talk will present our laboratory’s efforts to combine supramolecular events found in nature such as self-assembly, disorder-to-order transitions, or diffusion-reaction processes with engineering principles and processes to design bioinspired and biocooperative materials and devices. I will describe supramolecular fabrication techniques to develop tuneable hydrogels as disease and regeneration models, self-assembling fluidic devices, hierarchically mineralizing materials, and regenerative implants.

