

FUNCTIONAL POLYMER MATERIALS DESIGNED FOR ADVANCED APPLICATIONS AND SUSTAINABILITY

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With advances in the translation of nanoscience to nanotechnology comes a need to consider sustainable sourcing of the building blocks used to create the nanotechnological devices at the same time that the functional performance application is defined. This presentation will highlight contributions that polymer chemistry can make toward nanotechnology that is capable of impacting global needs, such as water-food-energy-health, and the grand challenges that must be solved in the coming decade. The focus will include an integration of current approaches to construct nanoscopic systems from natural products with the design of hybrid nanoscopic systems that are capable of pollutant sequestration and magnetic recovery toward environmental remediation, or for drug delivery with selective therapeutic outcomes, among other applications.

