

EUROMAT 2019 / Raw Materials

SYMPOSIUM: 9

Title: Design of Advanced Polymers as Substitutes for High Performance Applications		
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Abstract		
<p>Over the past few decades, advanced polymers have been the subject of intensive and impactful research as promising new materials used in several critical high performance applications. Compared to critical materials based on rare earth elements, polymer materials are less susceptible to supply challenges, such as supply chain disruption, price fluctuation, or long-term availability. Therefore, the development of high performance polymeric materials is playing a significant role in mitigating supply problems and reducing materials cost. This symposium will cover a broad range of research topics including design, synthesis, and manufacturing of advanced polymeric materials.</p> <p>While this symposium aims to cover relatively broad applications of advanced polymeric materials, the symposium particularly welcomes the topics such as (1) stimuli-responsive polymers (e.g. liquid-crystalline polymers, hydrogels, shape-memory-polymers etc.), (2) novel-crosslinked polymers (e.g. novel thermoset material) (3) self-healing polymers (e.g. vitrimer, dynamic polymers), (4) functional coating materials, and (5) advanced polymers for additive manufacturing.</p>		