

Abstract Submitted
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Metal-coordination: using more of nature's tricks to assemble new soft materials NIELS HOLTEN-ANDERSEN, Massachusetts Institute of Technology — Growing evidence supports a critical role of metal-coordination in soft biological material properties such as self-healing, underwater adhesion and autonomous wound plugging. Using bio-inspired metal-coordinating polymers, initial efforts to mimic these properties have shown promise. In addition, with polymer network mechanics dictated by coordinate crosslink dynamics material properties can be easily tuned from visco-elastic fluids to elastic solids. Given their exploitation in desirable material applications in nature, metal-coordinate crosslinking provides an opportunity to advance synthetic polymer materials design. Early lessons from this pursuit are presented.

Niels Holten-Andersen
Massachusetts Institute of Technology

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