

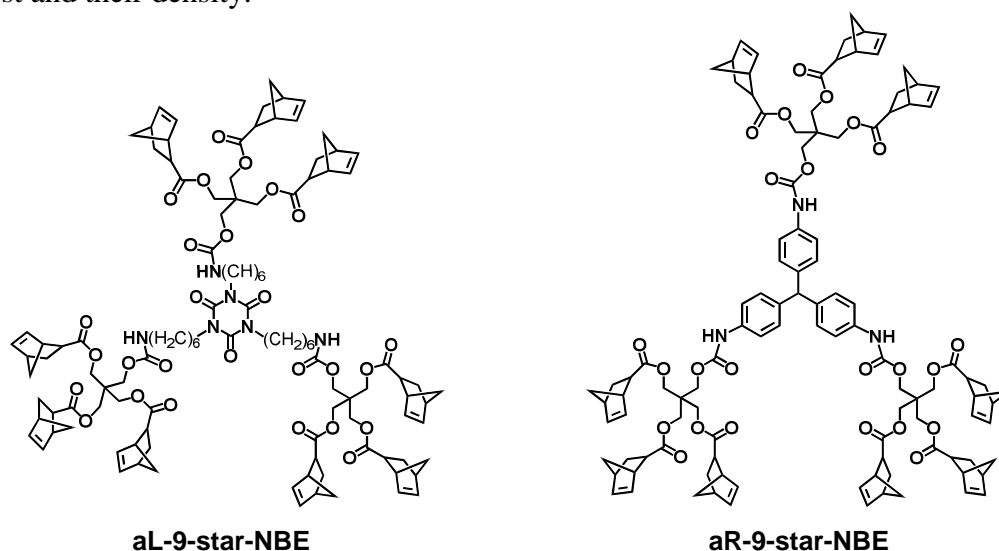
Polymeric Aerogels via Ring Opening Metathesis Polymerization of Aliphatic and Aromatic Urethane-Norbornene Star Monomers

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Ring Opening Metathesis Polymerization (ROMP) yields polymeric materials with unique mechanical, optical, electrical and chemical properties, and has been adopted recently for the synthesis of robust organic aerogels.¹ ROMP can be catalyzed by a broad range of metal-based catalytic systems, with forerunners being those of ruthenium, molybdenum and tungsten.² In this study, we implement Ru-based 1st generation Grubbs catalyst (**GC-I**) for the synthesis of aerogels via ROMP of urethane-norbornene star monomers, aL-9-star-NBE and aR-9-star-NBE, based on an aliphatic or an aromatic core, respectively (Scheme 1). The morphostructural properties of those aerogels are discussed as a function of the catalyst and their density.



Scheme 1. Monomers for the synthesis of polymeric aerogels via ROMP.

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2. http://www.nobelprize.org/nobel_prizes/chemistry/laureates/2005/schrock-lecture.html;
http://www.nobelprize.org/nobel_prizes/chemistry/laureates/2005/grubbs-lecture.html.

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