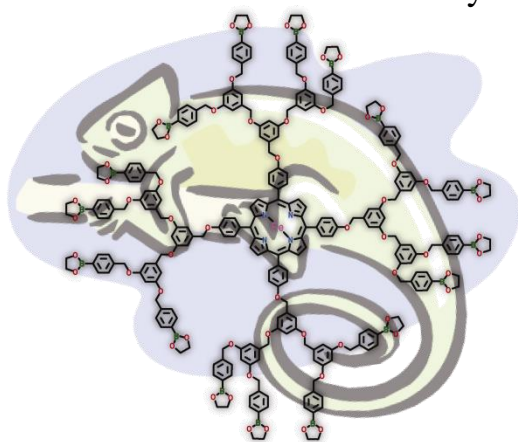
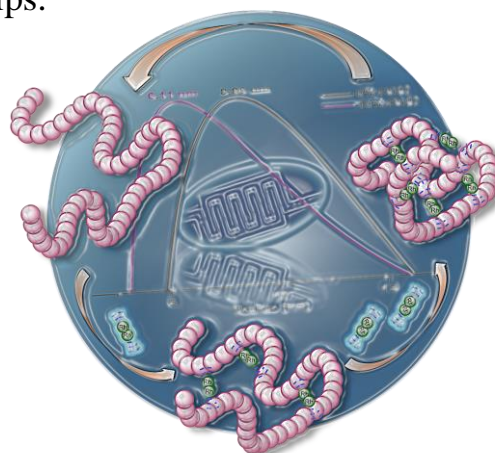


• The Lemcoff Group - Research Outline

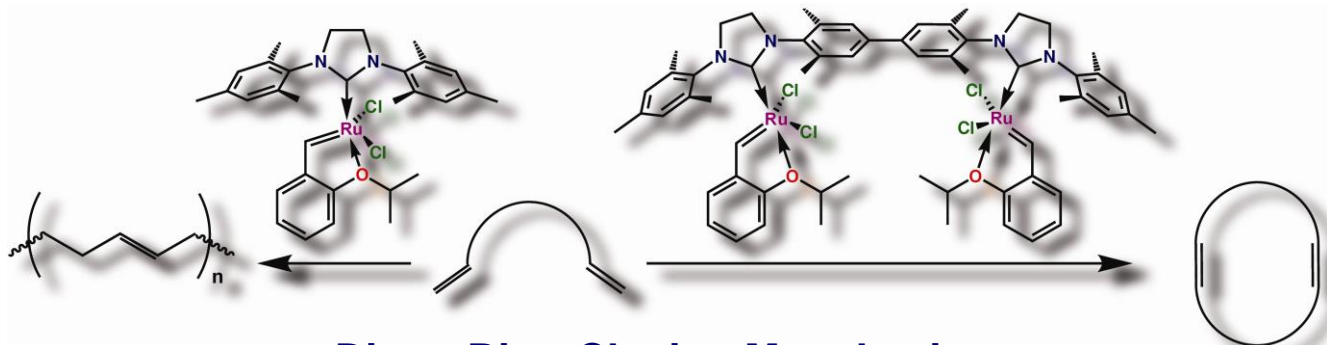
Our research deals with the synthesis, characterization, properties and analysis of novel macromolecular synthetic compounds, such as polymers and dendrimers, as well as new catalysts and reactions to produce them. As a modern organic synthetic research group, we are involved in every aspect of the study of macromolecules at the nanoscopic level. We devise not only new types of macromolecules and catalysts, but also new monomers, cross-linked networks, dynamic combinatorial libraries, and we also actively study the properties of these molecules, such as mass transfer within the polymeric structure and structure-activity relationships.



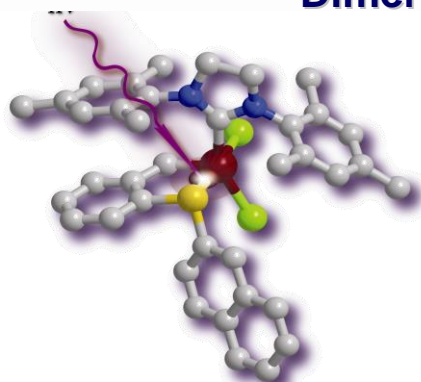
Catalysis with Dendrimers



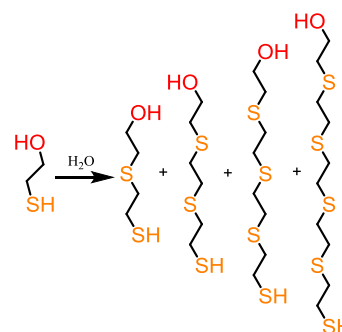
Organometallic Nanoparticles



Dimer Ring-Closing Metathesis



Switchable Ruthenium Metathesis Catalysts



New Reactions of Thiols in Water

Selected Recent Publications:

- Mavila S.; Diesendruck C.E.; Linde S.; Amir L.; Shikler R.; Lemcoff N.G. **“Polycyclooctadiene complexes of rhodium(I): direct access to organometallic nanoparticles”**, *Angewandte Chemie Int. Ed.*, **2013**, *52*, 5767-5770.
- Levin E.; Anaby A.; Diesendruck C.E.; Berger-Berkovich D.; Fuchs B.; Lemcoff N.G. **“Oligomerisation reactions of beta substituted thiols in water”**, *RSC Advances*, **2013**, *3*, 1735-1738.
- Shema-Mizrachi, M.; Pavan, G.M.; Levin, E; Danani, A; Lemcoff, N.G. **“Catalytic Chameleon Dendrimers”**, *Journal of the American Chemical Society*, **2011**, *133*, 14359-14367.
- Aharoni, A.; Vidavsky, Y.; Diesendruck, C.E.; Ben-Asuly, A.; Goldberg, I. and Lemcoff, N.G. **“Ligand Isomerization in Sulfur-Chelated Benzylidenes”**, *Organometallics*, **2011**, *30*, 1607-1615.
- Tzur, E.; Goldberg, I.; Ben-Asuly, A.; Szadkowska, A.; Makal, A.; Woźniak, K.; Grela, K. and Lemcoff N. G. **“Studies on Electronic Effects on O -, N- and S- Chelated Ruthenium Olefin Metathesis Catalysts”**, *Chemistry – a European Journal*, **2010**, *16*, 8726-8737.
- Diesendruck, C. E.; Tzur, E.; Ben-Asuly, A.; Vidavsky, Y.; Goldberg, I.; Straub, B. F. and Lemcoff, N. G. **“Predicting the Cis-Trans Dichloro Configuration of Group 15-16 Chelated Ruthenium Olefin Metathesis Complexes: A DFT and Experimental Study”**, *Inorganic Chemistry*, **2009**, *48*, 10819-10825.
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- Tzur, E.; Ben-Asuly, A.; Diesendruck, C.E.; Goldberg, I. and Lemcoff, N.G. **“Homo-Binuclear Ruthenium Catalysts for Dimer Ring Closing Metathesis”**, *Angewandte Chemie Int. Ed.*, **2008**, *34*, 6422-6425.
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- Ben-Asuly A.; Tzur E.; Diesendruck C.; Sigalov M., Goldberg I.; Lemcoff N.G. **“A Thermally Switchable Latent Ruthenium Olefin Metathesis Catalyst”** *Organometallics*, **2008**, *27*, 811-813.