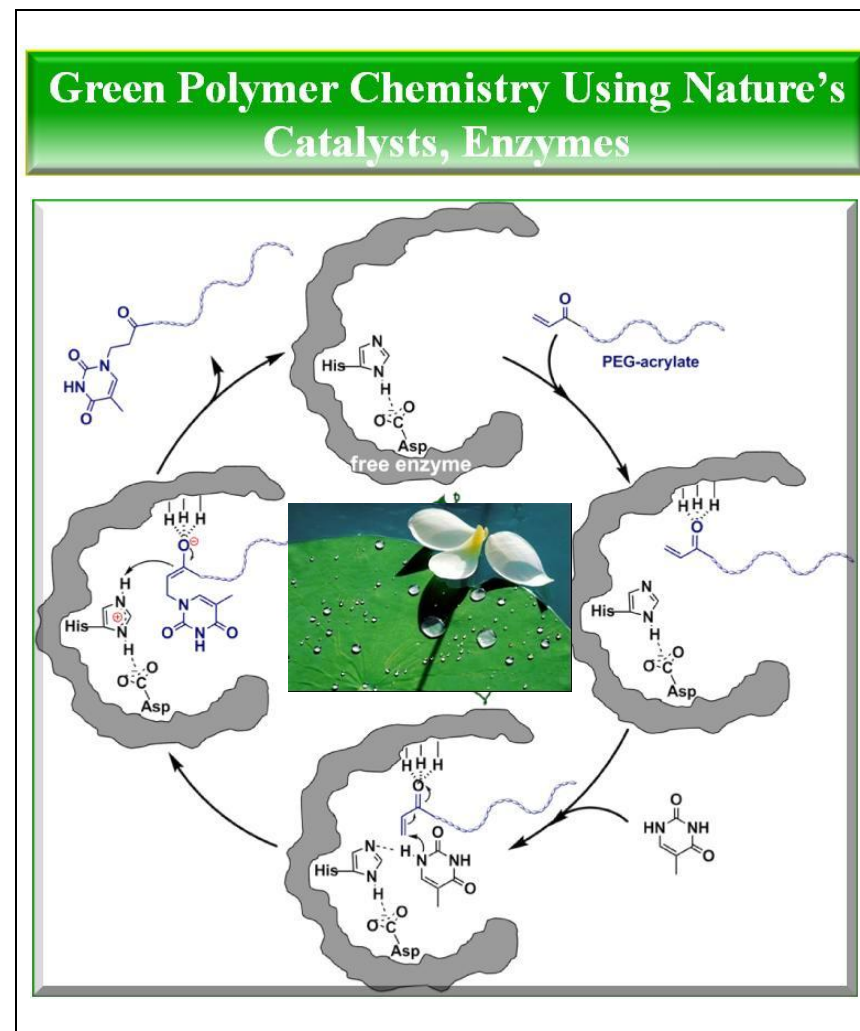


Surface Modification of Polyisobutylene-based Biomaterials

Judit E. Puskas (U. Akron), DMR-Award #0804878

Intellectual Merit: We have synthesized a series of functionalized polymers, block copolymers and new architectures using *Candida Antarctica* Lipase B CALB To catalyse transesterification and Michael addition reactions. Significantly, low molecular liquid polymers were functionalized under solventless conditions. The reactions are quantitative, yielding very pure products. In collaboration with Professor Chrys Wesdemiotis in the Chemistry Department MALDI-ToF is used to verify the structures. Some polymers were sprayed onto polyisobutylene-based biomaterials that were developed under Grant#0509687 to modify their surface properties. Surfaces with water contact angles ranging from 80 to 146 ° were obtained – this latter qualifies as superhydrofobic.



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Whirls and Twirls on a Vortex of Water



New web site: <http://gozips.uakron.edu/~jpuskas/>

More than 100 people attended the lecture by acclaimed artist **Alice Aycock** as part of the Synapse series, fostering enlightened collaborations between art and science. This lecture was made possible through the current grant in a framework of a new program connecting science and art, to broaden the horizon for students of both disciplines. This was in collaboration with the Mary Schiller Myers School of Art (Professor Matthew Kolodziej). The use of polymers in sculptures was discussed. This summer we have 3 REUs, an RET and a high school student in our laboratories.