## Type: Poster (*Purdue University*) Title: **Convergent Synthesis of Frechét Azidopoly(benzyl) Ether Dendrons** Author: **Greta Jakstonyte,** Will Forrest and Tong Ren<sup>\*</sup>

*Abstract.* Frechét azidopoly(benzyl) ether dendrons (Chart 1) were prepared via a convergent methodology from 3,5-dihydroxybenzyl alcohol as the starting monomer unit. The convergent synthesis provides for growth through a single focal point, an approach that affords even better control over the dendrimer backbone structure and the placement of functional groups within it. The tree-like structure of dendrimers, which are made up of repeating units arranged in a hierarchical, self-similar fashion around a core, raises the possibility of their application as artificial antenna systems ("photonic antennae"). The number of potential absorbing groups surrounding the core increases exponentially with each consecutive generation, which allows the molecule to harvest more light, since each branching point or end-group can act as a chromophore. These dendrimers were functionalized with Ru<sub>2</sub> complexes to investigate Ru<sub>2</sub>-containing dendritic complexes as photovoltaic materials for solar energy harvesting.