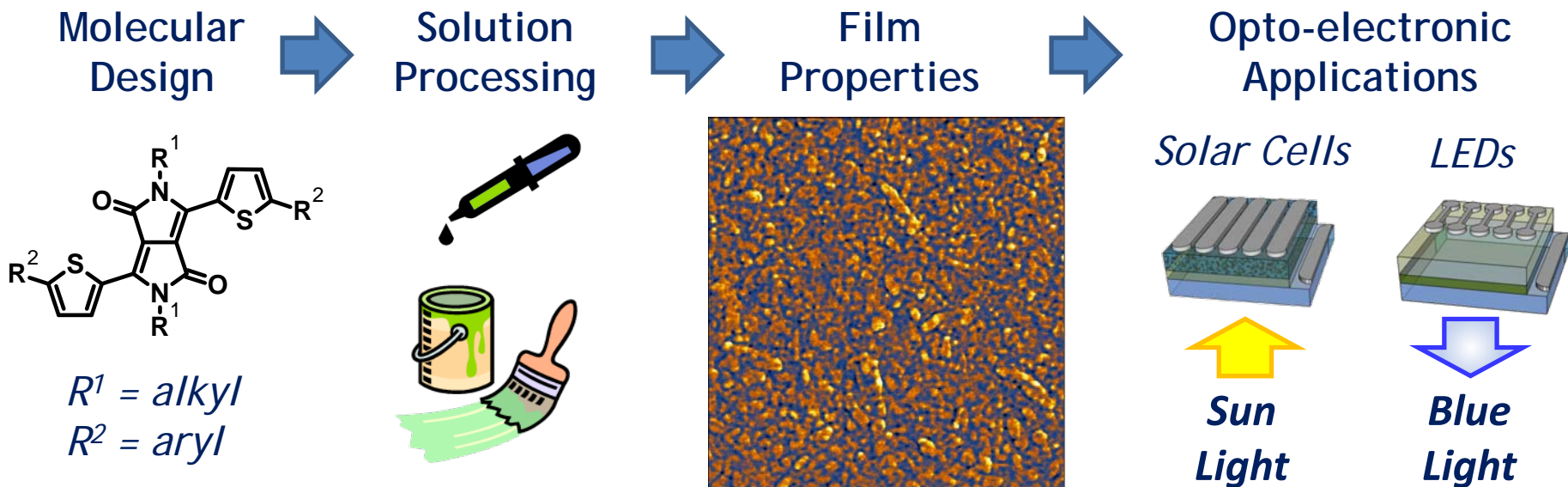




# Structure-Function Relationships in Solution-Processable, Molecular Semiconductors

Our group explores soluble small molecule (SM) semiconductors as alternatives to polymers in opto-electronic applications including solar cells and light emitting diodes (LEDs). Although polymers generally have better film-forming properties, SMs offer significant advantages in terms of synthesis and purification costs.



By systematically varying molecular structures and processing conditions, we've identified structures and conditions which lead to films with exceptional optical, electronic and morphological properties, yielding solar cells and LEDs with efficiencies approaching the best polymer-based systems.