Process Oriented Guided Inquiry Learning (POGIL) is a constructivist pedagogy that emphasizes both content learning and the development of process skills. In a POGIL classroom, students work in small groups on activities designed to guide students to develop concepts for themselves. POGIL has been used successfully in introductory Organic Chemistry classes throughout the country. The published materials by Andrei Straumanis take a primarily mechanistic approach, focusing on the principles that underlie organic reactions and the relationship between structure and reactivity. This curriculum is excellent preparation for a subsequent course in Physical Organic Chemistry. I have developed guided inquiry activities for an upper-level undergraduate course on this subject. This presentation will discuss these new activities in detail as well as give an introduction to POGIL.