

**Present and future ultrafast laser spectroscopy experiments
at Wigner RCP**

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The primary interest of our research group is the design and investigation of transition metal based functional molecules. For the targeted functions, it is essential to determine the potential energy landscape of these molecules and to reveal the molecular and electronic structure dynamics following optical excitation. In addition to theoretical calculations and time-resolved X-ray spectroscopy, presently we use femtosecond transient optical spectroscopy to study ultrafast relaxation processes. In this presentation, I will discuss some aspects of our recent experimental work, and outline our plans for the expansion of our ultrafast spectroscopy capabilities.