

Nonlinear optical microscopy on nano-structural systems

Abstract

Recently, the imaging science has garnered a keen attention, critically offering additional appreciation on various already-valued optical spectroscopy in a three dimensionally-resolvable fashion. In this talk, I'll primarily focus on discussing such imaging science of the nonlinear optical spectroscopy which requires higher energy than commonly used chemical analytic tools such as UV-VIS, Raman and fluorescence spectroscopy. A brief historical review regarding how scientists achieved such high energy "optical stimulators" will be followed by several illustrations on the early-time successful nonlinear optical experiments. Then, the talk will be finalized by suggesting some personal achievements and third harmonic generation modelling of silicon nano-membrane systems if time frame allows.