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***A New Femtosecond Nonlinear Transmission Experiment for Accurate Determination of Intrinsic Two Photon Absorption Spectra of Non-Fluorescent Chromophores***

We have developed and tested a new femtosecond experiment for measuring the intensity dependent transmission of two photon absorbing (2PA) chromophores in a broad range of wavelengths. This technique offers a very high accuracy ( $\sim 0.05\%$  transmission change) and is of particular importance for characterization of the 2PA properties of Platinum complexes and other compounds with low fluorescence emission. As a preliminary demonstration of this new technique we have measured the intrinsic 2PA spectra and the 2PA cross sections of some known chromophores that have been previously characterized by the fluorescence method of 2PA spectrum evaluation.