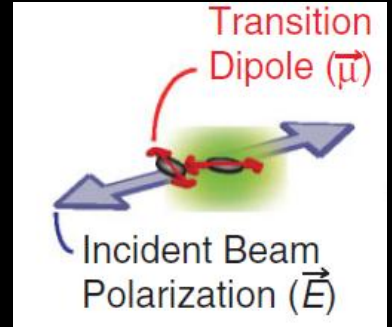


Polarization-Controlled Photoswitching Resolves Dipole Directions with Subwavelength Resolution



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We present a polarization-controlled photoswitching scheme that resolves the direction of the transition dipole of a molecule with subwavelength resolution. The scheme is based on the use of a polarized incident beam and a polarized detection beam. The resulting photoswitched signal is a function of the angle between the incident beam polarization and the transition dipole direction. By measuring this signal for different incident beam polarizations, the direction of the transition dipole can be resolved. The resolution is subwavelength, as demonstrated by numerical simulations and experimental results.

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