

## The form of Abstract

### **Anisotropic optical properties of vertically aligned SWNT films and an attempt toward structurally controlled synthesis**

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We review our recent results regarding the optical characterizations of our vertically aligned single-walled carbon nanotube (VA-SWNT) films. In particular, we have performed several *polarization dependent* optical studies using the VA-SWNT films, including resonant Raman scattering [1,2], optical absorption spectroscopy [3], ultrafast transient absorption spectroscopy [4], and electron energy-loss spectroscopy [5].

Pertaining to the optical absorption study [3], the existence of optical baseline extended from UV region ( $\sim 4 - 5$  eV) is recently drawing an increasing attention while its origin and properties have long been under debate. Our latest interpretation on these optical absorption features is presented.

In addition to those studies with VA-SWNTs, our recent attempt for structurally controlled synthesis of individualized SWNTs is going to be introduced briefly.

#### **References:**

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