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Takao Itoh

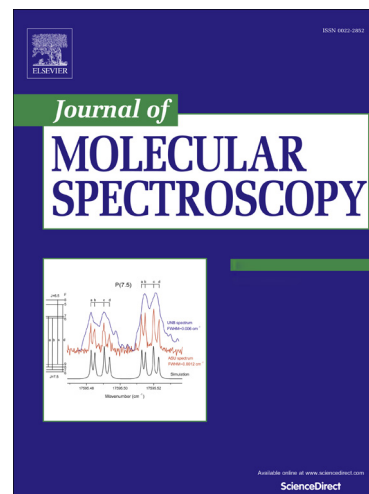
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**Fluorescence and phosphorescence emission of quinoline vapor**

Takao Itoh

*Graduate School of Integrated Arts and Sciences, Hiroshima University,*

*1-7-1 Kagamiyama, Higashi-Hiroshima City, 739-8521 Japan*

*E-mail address: titoh@hiroshima-u.ac.jp*

**Abstract**

Pressure and temperature dependence of fluorescence and phosphorescence spectra have been investigated for quinoline in the static vapor phase. It is shown that the intensity of the  $T_1(\pi, \pi^*) \rightarrow S_0$  phosphorescence relative to that of the  $S_1(n, \pi^*) \rightarrow S_0$  fluorescence decreases with decreasing pressure and with increasing temperature. The relaxation processes of quinoline vapor are discussed based on the pressure and temperature dependence of the emission. The data include the vibrational analysis of the bands appearing in the  $T_1(\pi, \pi^*) \rightarrow S_0$  phosphorescence spectrum.

Keywords: Quinoline vapor; Fluorescence; Phosphorescence; Excitation energy dependence

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