

# Turkish Journal of Chemistry

Turkish Journal

of

Chemistry

Synthesis, Spectral and Thermal Degradation Kinetics of Divalent Cadmium Complexes of Dothiepine and Diphenhydramine

Halehatty S. BHOJYA NAIK

Department of Studies and Research in Industrial Chemistry,

Kuvempu University,

JnanaSahyadri, Shankaraghatta-577 451, Shimoga, Karnataka-INDIA

e-mail: root@shikuv.kar.nic.in



Parasuramapura R. CHETANA

Department of Chemistry, Bangalore University, Bangalore, Karnataka-INDIA

Hosakere D. REVANASIDDAPPA

Department of Chemistry, University of Mysore, Manasagangotri,

Mysore-570 006, Karnataka-INDIA

 [Keywords](#)  
 [Authors](#)



[chem@tubitak.gov.tr](mailto:chem@tubitak.gov.tr)

[Scientific Journals Home](#)  
[Page](#)

**Abstract:** Cadmium(II) complexes with 3-(6H-dibenzo[b,e] thiepin-11-ylidene) propyl dimethyl amine chloride (dot) and 2-diphenyl methoxy--N,N-dimethylamine hydrochloride (dp) were synthesised and characterised by reflectance, IR,  $^1\text{H}$  NMR, magnetic moments and conductivity measurements. The new complexes studied for kinetics of thermal degradation by thermogravimetric analyses (TGA) and derivative thermogravimetric studies (DTG) in a static nitrogen atmosphere at a heating rate of  $10^\circ\text{C min}^{-1}$ . The kinetic and thermodynamic parameters such as energy of activation ( $E_a$ ), frequency factor ( $\ln A$ ), enthalpy ( $\Delta H$ ), free energy ( $\Delta G$ ), and entropy ( $\Delta S$ ) evaluated. The energy of activation values for the degradation of (dot) and (dp) complexes were found to be in the range  $22.3\text{-}125.4 \text{ kJ mol}^{-1}$ .

---

Turk. J. Chem., **26**, (2002), 565-572.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Chem.,vol.26,iss.4.](#)