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Synthesis, Spectral, Thermal and Structural Characterization of the Copper(II) Saccharinato Complex of 2–Aminopyrimidine, [Cu(sac–*O*)$_2$(ampym–*N*)$_2$(H$_2$O)$_2$]·2ampym

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Bis(2-aminopyrimidine-*N*)diaquabis(saccharinato-*O*)copper(II) di(2-aminopyrimidine), [Cu(sac-*O*)$_2$(ampym-*N*)$_2$(H$_2$O)$_2$]·2ampym was synthesized and characterized by means of elemental analysis, IR and UV-vis spectroscopy, magnetic susceptibility, simultaneous TG, DTG, DTA techniques, and X-ray diffraction. The complex crystallizes in the monoclinic space group *P*21/*c* [*a* = 7.4697(5), *b* = 10.1679(5), *c* = 22.743(2) Å, *β*= 92.844(5), *Z* = 2, *R* = 0.0275, *wR*= 0.0757, *V* = 1725.26(19) Å^3]. The copper atom is bonded to two ampym N atoms and two sac O atoms as well as to two water O atoms in *trans* positions in the geometry of a distorted octahedron. There are also two ampym moieties as solvate molecules in the unit cell. The crystal structure is stabilized by N–H···O, O–H···N and C–H···O type hydrogen bonding interactions. Intermolecular π–π interactions between the phenyl rings of ampym groups and C–H···π interactions also support the packing of the molecules (Fig. 1). The thermal decomposition of the complex has been studied.

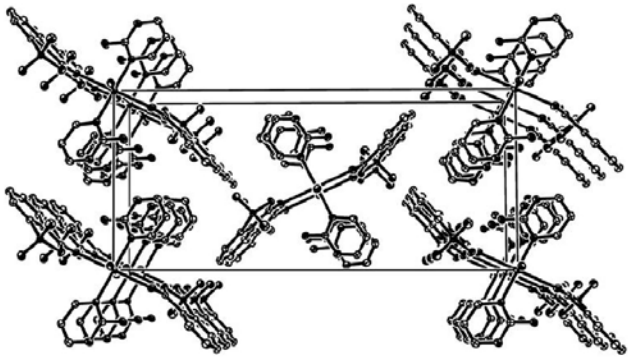

Figure 1. Packing of the components of [Cu(sac-*O*)$_2$(ampym-*N*)$_2$(H$_2$O)$_2$]·2ampym in the unit cell, normal to (100).