Packing Motifs in [M(bpy)ĆXĆ] Coordination Compounds (bpy = 2,2′-bipyridine; X = F, Cl, Br, I)

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)

ID 4664060
Author(s) Constable, Edwin C.; Housecroft, Catherine E.
Author(s) at UniBasel Housecroft, Catherine ; Constable, Edwin Charles ;
Year 2023
Title Packing Motifs in [M(bpy)ĆXĆ] Coordination Compounds (bpy = 2,2′-bipyridine; X = F, Cl, Br, I)
Journal Crystals
Volume 13
Number 3
Pages / **Article-Number** 505
Keywords metal complexes; 2,20-bipyridine; cis-[M(bpy)2X2]; -stacking; C–H...X contacts
Packing motifs within structurally characterized cis-[M(bpy)2X2] (M = any metal, bpy = 2,20-bipyridine, X = F, Cl, Br, I) coordination compounds have been investigated using data from the Cambridge Structural Database. Compounds fall into two classes: non-solvated cis-[M(bpy)2X2] moieties and those with additional lattice molecules (solvent or other molecules). A recurring packing motif is a dimeric unit involving intermolecular face-to-face -stacking of bpy ligands and CHbpy...X contacts, although in several cases, slippage of the stacked bpy units reduces the effectiveness of the face-to-face interaction leaving the CHbpy...X contacts as the dominant crystal-packing interaction. The prevalence of the dimeric unit versus the assembly of 1D-chains in the solid state is described.
Publisher MDPI
ISSN/ISBN 2073-4352
edoc-URL https://edoc.unibas.ch/94043/
Full Text on edoc Available;
Digital Object Identifier DOI 10.3390/cryst13030505