

**Neutronen- und Röntgenbeugungsuntersuchungen an Pulvern und Einkristallen von Strukturverwandten des Berliner Blaus:
CsMn^{II}Cr^{III}(CN)₆ · D₂O, NMe₄Mn^{II}(Cr_{0,06}Mn_{0,94})^{III}(CN)₆ · 8 H₂O,
NMe₄Mn^{II}Co^{III}(CN)₆ · 8 H₂O, Mn₃^{II}[Mn^{III}(CN)₆]₂ · 15 H₂O
und Cd₃[Fe^{III}(CN)₆]₂ · 15 H₂O**

Neutron and X-Ray Diffraction Studies on Powders and Single Crystals of Compounds Structurally Related to Prussian Blue: CsMn^{II}Cr^{III}(CN)₆ · D₂O, NMe₄Mn^{II}(Cr_{0,06}Mn_{0,94})^{III}(CN)₆ · 8 H₂O, NMe₄Mn^{II}Co^{III}(CN)₆ · 8 H₂O, Mn₃^{II}[Mn^{III}(CN)₆]₂ · 15 H₂O and Cd₃[Fe^{III}(CN)₆]₂ · 15 H₂O

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Crystal Structure, Neutron Diffraction, Prussian Blue, Hexacyanometallate(III)

The results of a Rietveld refinement of CsMnCr(CN)₆ · D₂O neutron powder data ($a = 1084.3(1)$ pm, $F\bar{4}3m$, $Z = 4$) and of a neutron single crystal structure refinement of tetragonal NMe₄Mn^{II}(Cr_{0,06}Mn_{0,94})^{III}(CN)₆ · 8 H₂O ($a = 1065.8(21)$, $c = 1064.6(26)$ pm, $P4/n$, $Z = 2$) at ambient temperature are reported. Single crystal X-ray analyses of the isostructural octahydrate NMe₄MnCo(CN)₆ · 8 H₂O ($a = 1062.1(1)$, $c = 1046.2(1)$ pm) and of gel-grown crystals of cubic Mn₃^{II}[Mn^{III}(CN)₆]₂ · 15 H₂O ($a = 1062.6(3)$ pm, $Fm\bar{3}m$, $Z = 4/3$) and Cd₃[Fe(CN)₆]₂ · 15 H₂O ($a = 1067.7(3)$ pm) were performed as well. The latter “Prussian Blues” are highly disordered and intermediate with respect to cyano-bridging between the above three-dimensional cesium and one-dimensional tetramethylammonium compounds.