

## STRUCTURAL SCIENCE

 CRYSTAL ENGINEERING MATERIALSVolume 77 (2021)
Supporting information for article:

Crystal structure and enantiomeric layer disorder of a copper(I) nitrate $\pi$-coordination compound

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## Supporting information

Table S1 The comparison between fits from SHELX structure refinement and JANA2006 taking into account enantiomeric layer disorder in $\left[\mathrm{Cu}(\right.$ m-dmphast $\left.) \mathrm{NO}_{3}\right]$.

This is a table headnote (style: IUCr table headnote)

|  | SHELX | JANA2006 |
| :--- | :--- | :--- |
| Data/restrains/constrains/parameters | $3247 / 0 / 0 / 201$ | $13521 / 0 / 345 / 200$ |
| Goodness-of-fit on $\mathrm{F}^{2}$ | 1.065 | $1.64^{*}$ |
| $R\left[F_{0}^{2}>2 \sigma\left(F_{0}^{2}\right)\right]$ | $R_{1}=0.0493, w R_{1}=0.1162$ | $R_{1}=0.0376, w R_{1}=0.0665$ |
| $R$ (all) | $R_{2}=0.0609, w R_{2}=0.1247$ | $R_{2}=0.0504, w R_{2}=0.0687$ |
| Largest diff. peak and hole $\left(\mathrm{e} \AA^{-3}\right)$ | 2.69 and -0.62 | 0.40 and -0.62 |

*The formulae for goodness-of-fit calculation are different in SHELX and JANA2006 programs.


Figure S1 View at the three layers of the $\left[\mathrm{Cu}(\right.$ m-dmphast $\left.) \mathrm{NO}_{3}\right]$ disordered structure perpendicular to the $a$-direction. The $\mathrm{C}-\mathrm{H} \cdots \mathrm{O}$ and $\mathrm{C}-\mathrm{H} \cdots \mathrm{N}$ bonds between adjacent $(\mathbf{E}, \mathbf{P}$ and $\mathbf{P}, \mathbf{P})$ layers are marked with orange thick dashed lines.


Figure S2 The Hirshfeld surface of layer $\mathbf{P}$ (a) and $\mathbf{E}$ (b) segment between two layers of $\mathbf{P}$ type. A view down the $c$ crystallographic direction.


Figure S3 The 2D fingerprint plot of molecules in $\mathbf{P}$ (a)-(c) and $\mathbf{E}$ (d)-(f) layers situated between two layers of $\mathbf{P}$ type; $d_{\mathrm{e}}$ - the distance from the point to the nearest nucleus external to the surface, $d_{\mathrm{i}}-$ the distance to the nearest nucleus internal to the surface.



















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Figure S4 Graphical representation of the $\left[\mathrm{Cu}(m\right.$-dmphast $\left.) \mathrm{NO}_{3}\right]$ crystal final $1-D$ NNI model $(J=-2)$. One thousand layers of $\mathbf{P}(\rightarrow$, blue colour) and $\mathbf{E}(\leftarrow$, red colour) types are presented. Each arrow represents a single layer. The layers (arrows) should form one column; for simplicity, they are placed in the following lines.

