Contribution ID : **104** Type : **Oral**

Structure determination of a zinc hydroxide chloride from powder diffraction

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Zinc-air battery with near-neutral aqueous chloride electrolytes has received increasing attentions in high power applications recently. Unwanted precipitation of zinc hydroxide chloride products reduces the battery capacity and lifetime. One of these precipitation phases has unknown crystal structure. The diffraction pattern of a synthesised phase was collected on the Australia Synchrotron Powder Diffraction beamline, and its crystal structure was determined using simulated annealing method with the assistance of rigid body in DIFFRAC.TOPAS v6 software. The refined structure in *P21/c* space group shows similar layered construction to that in simonkolleite but more water molecule in the interlayer and larger layer spacing. The on-going work of crystal structure determination of this phase will support the study of precipitation mechanism in Zinc-Air batteries.

Speakers Gender

Male

Travel Funding

No

Level of Expertise

Experienced Researcher

Do yo wish to take part in the poster slam

No

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