

Electronic Supplementary Information (ESI)

Exploring the electronic structure of aluminum metal–organic framework Basolite A100: solid-state synchronous fluorescence spectroscopy reveals new charge excitation/relaxation pathways

Cole Grinnell and Alexander Samokhvalov*

*Correspondence:

Department of Chemistry, Morgan State University, 1700 East Cold Spring Lane, Baltimore, MD 21251, USA. Email Alexandr.Samokhvalov@morgan.edu

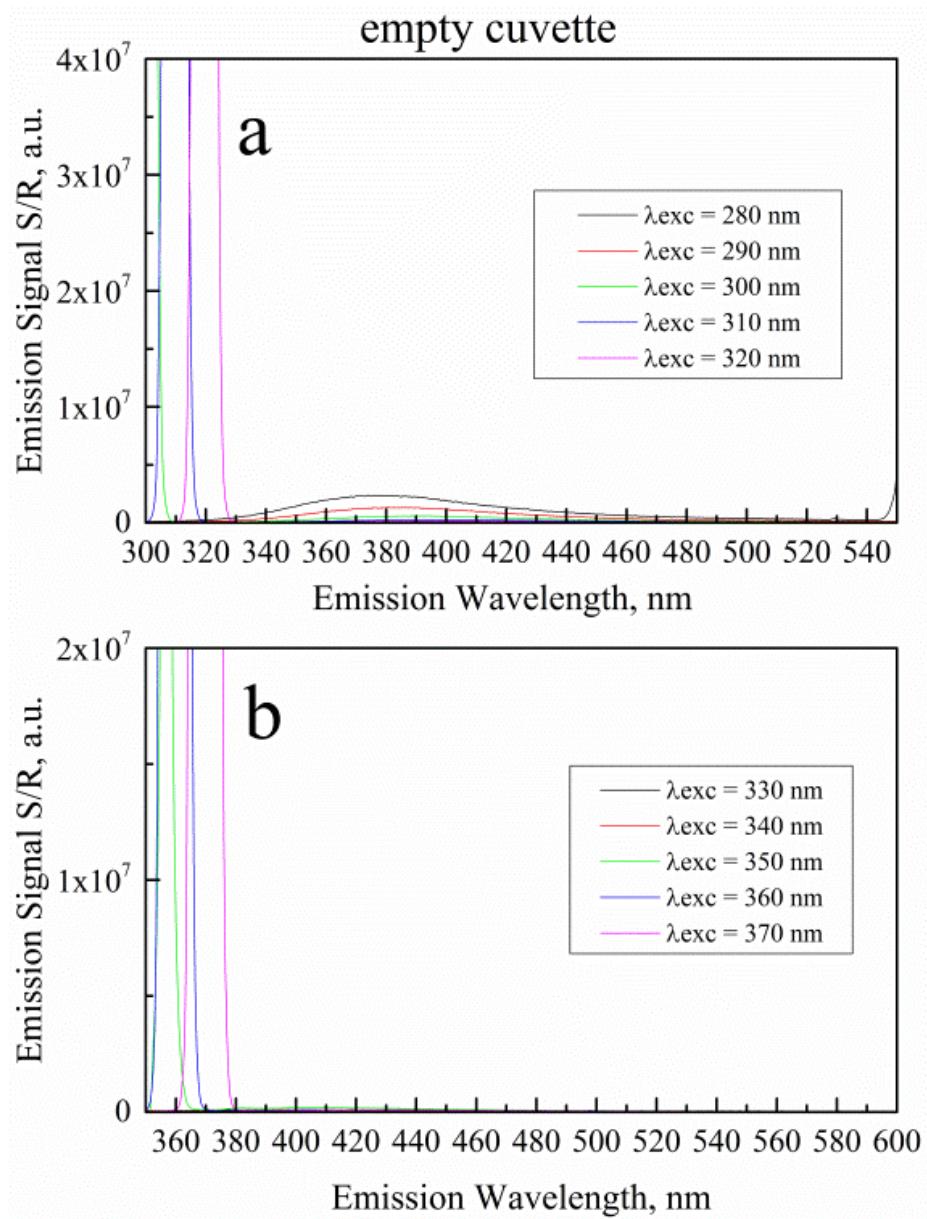


Figure S1. The solid-state “conventional” photoexcitation-wavelength dependent fluorescence emission spectra of an empty cuvette. a) $\lambda_{\text{exc}} = 280 - 320 \text{ nm}$. b) $\lambda_{\text{exc}} = 330 - 370 \text{ nm}$.

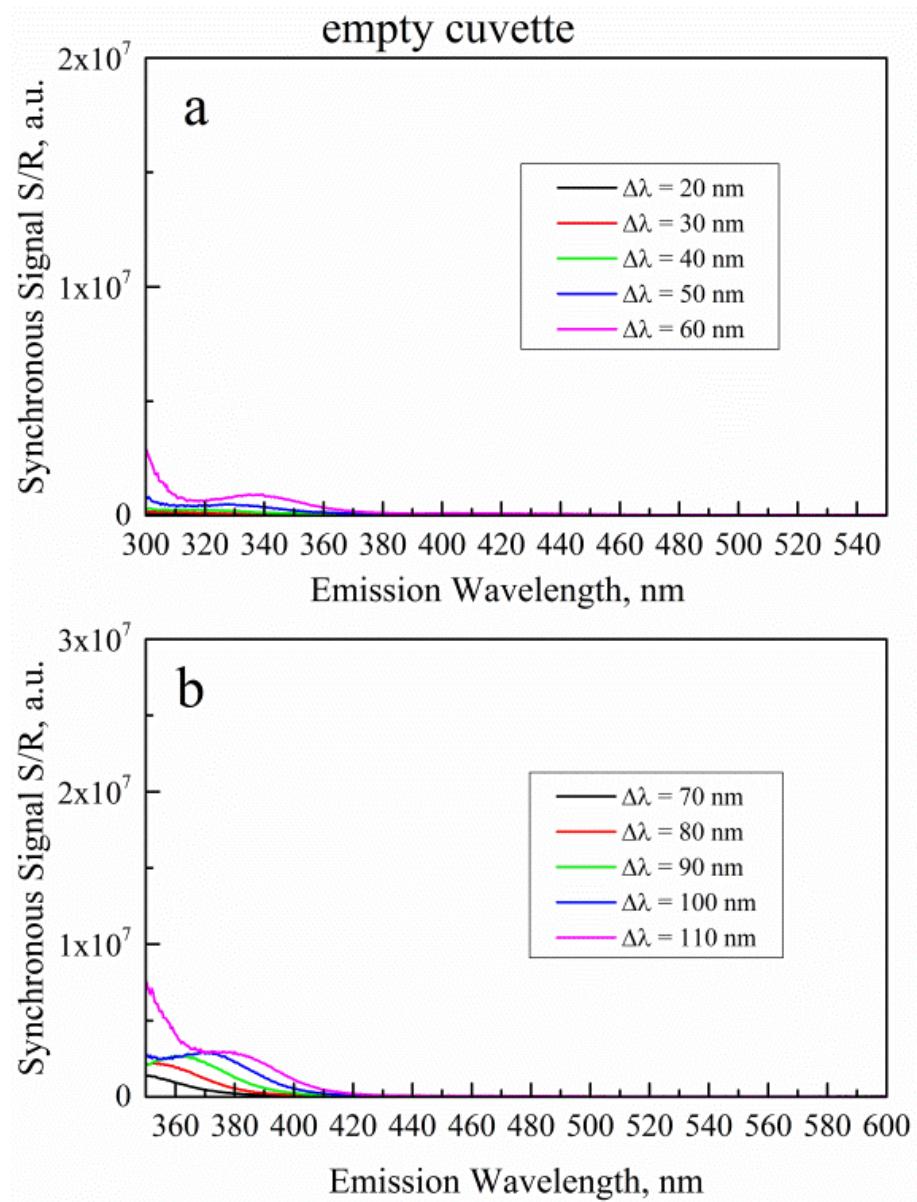


Figure S2. The solid-state synchronous fluorescence spectra of an empty cuvette at variable $\Delta\lambda$.

a) $\Delta\lambda = 20 - 60 \text{ nm}$. b) $\Delta\lambda = 70 - 110 \text{ nm}$.

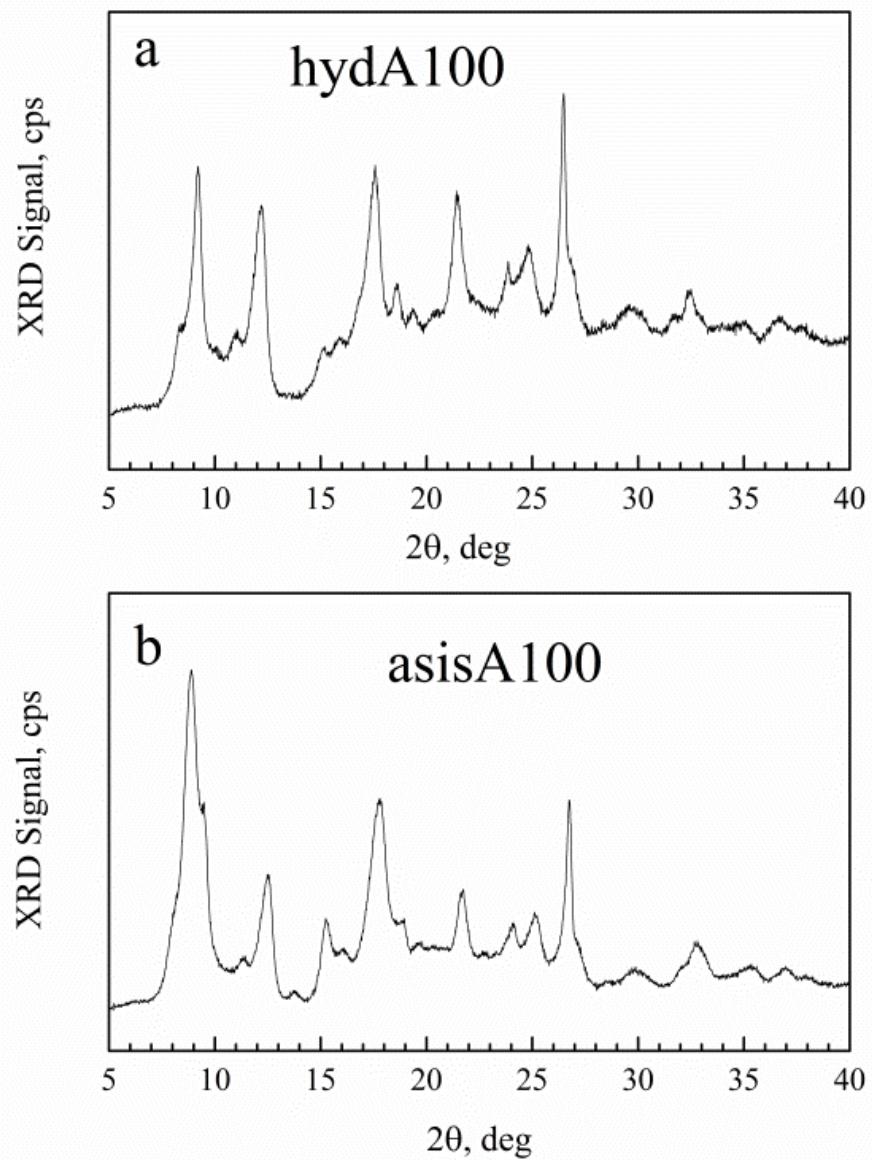


Figure S3. Powder XRD patterns of Basolite A100. a) The hydA100. b) The asisA100.

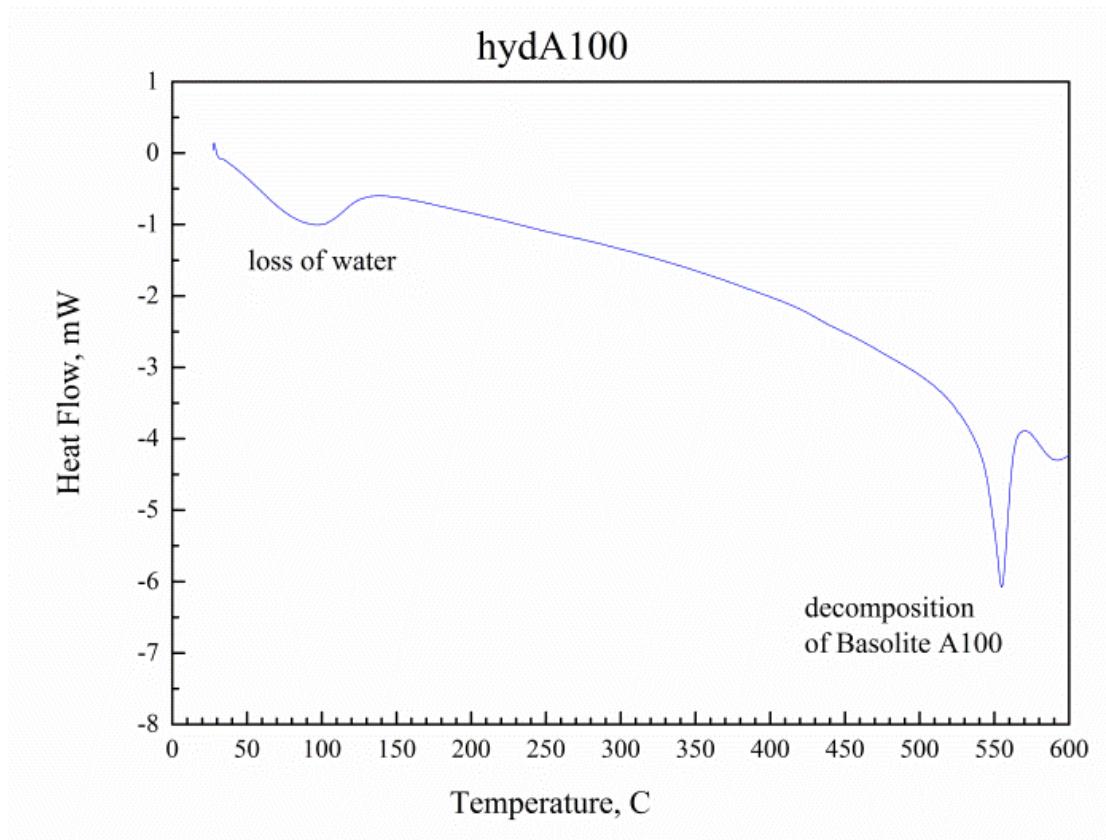


Figure S4. Differential scanning calorimetry (DSC) of hydA100.

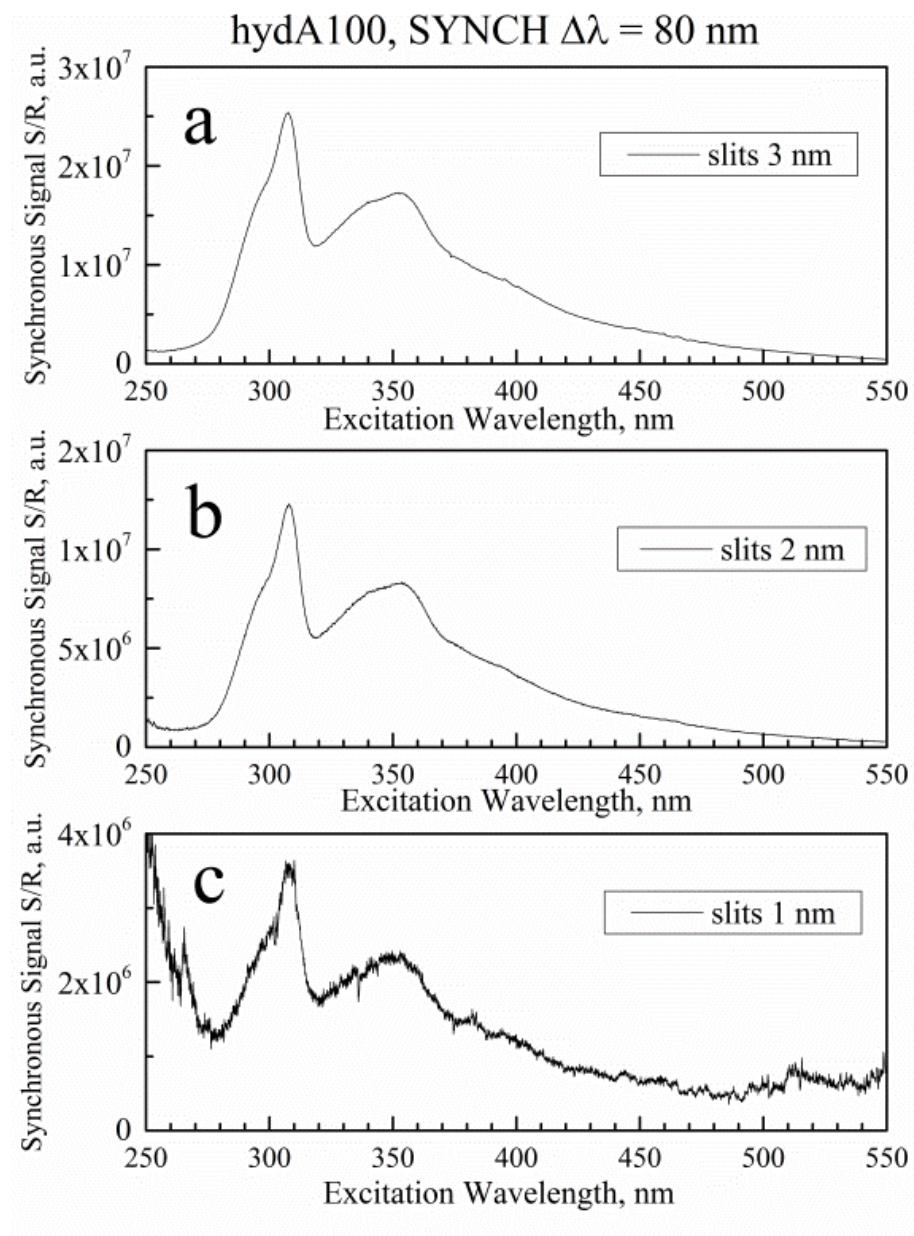


Figure S5. The solid-state synchronous fluorescence (excitation) spectra of hydA100 at $\Delta\lambda = 80$ nm with variable optical slits. a) 3 nm. b) 2 nm. c) 1 nm.