

Supporting Information for:

Role of Individual Bands in the Unusual Temperature-Dependent Bandgap of Methylammonium Lead Iodide

Salma Khatun,¹ Abhishek Maiti,¹ Gangadhar Das,² and Amlan J. Pal^{1}*

¹School of Physical Sciences, Indian Association for the Cultivation of Science, Jadavpur, Kolkata
700032, India

²Indian Beamline, Photon Factory, KEK, High Energy Accelerator Research Organization, 1-1, Oho,
Tsukuba-shi, Ibaraki-ken, 305-0801, Japan

AUTHOR EMAIL ADDRESS: sspajp@iacs.res.in

CORRESPONDING AUTHOR FOOTNOTE: Corresponding author. Tel: +91-33-24734971. Fax: +91-33-24732805.

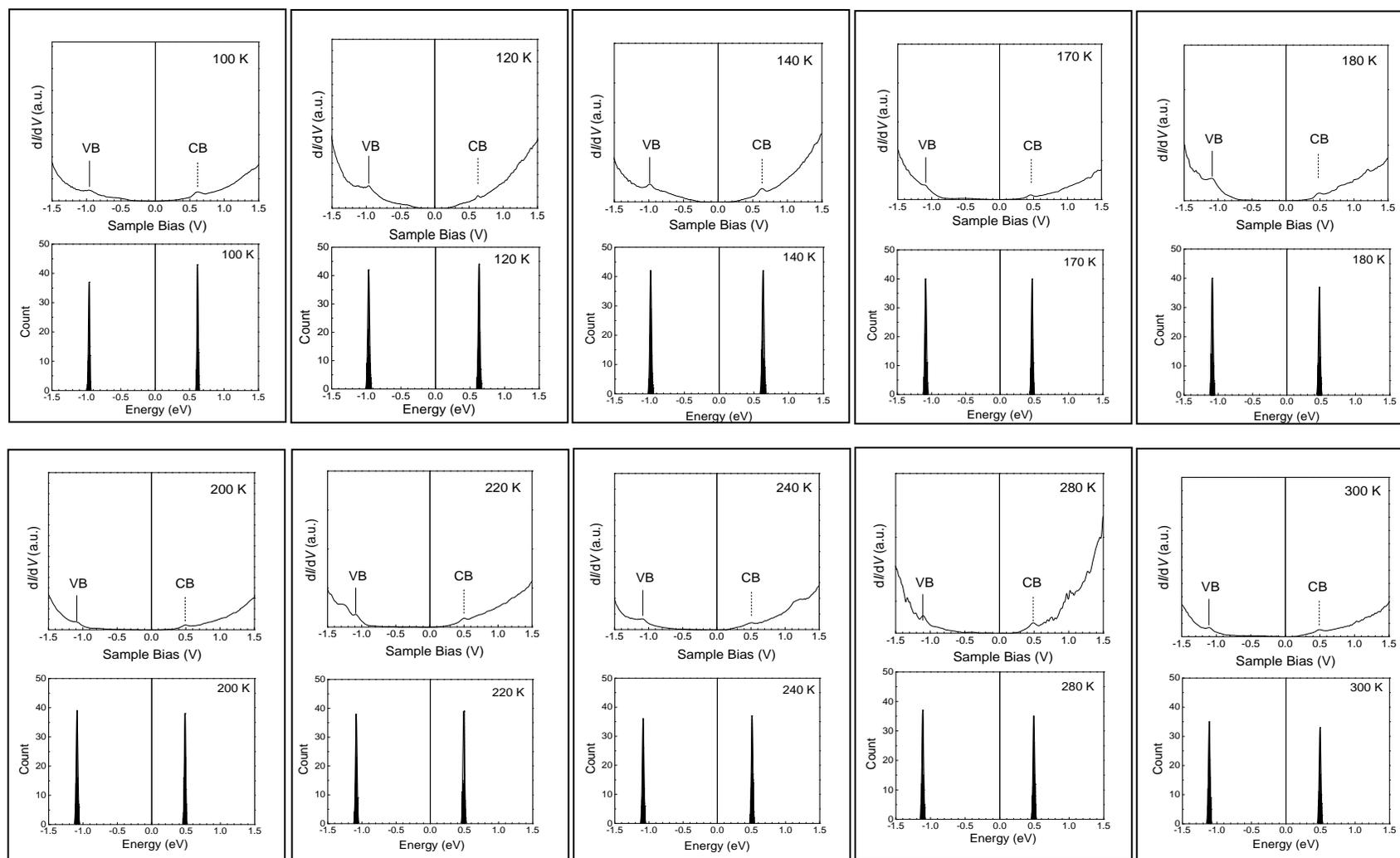


Figure S1. dI/dV versus sample voltage plots of $\text{CH}_3\text{NH}_3\text{PbI}_3$ at different temperatures along with histogram of conduction band (CB) and valence band (VB) energies from dI/dV measurements at many points on the ultrathin film.

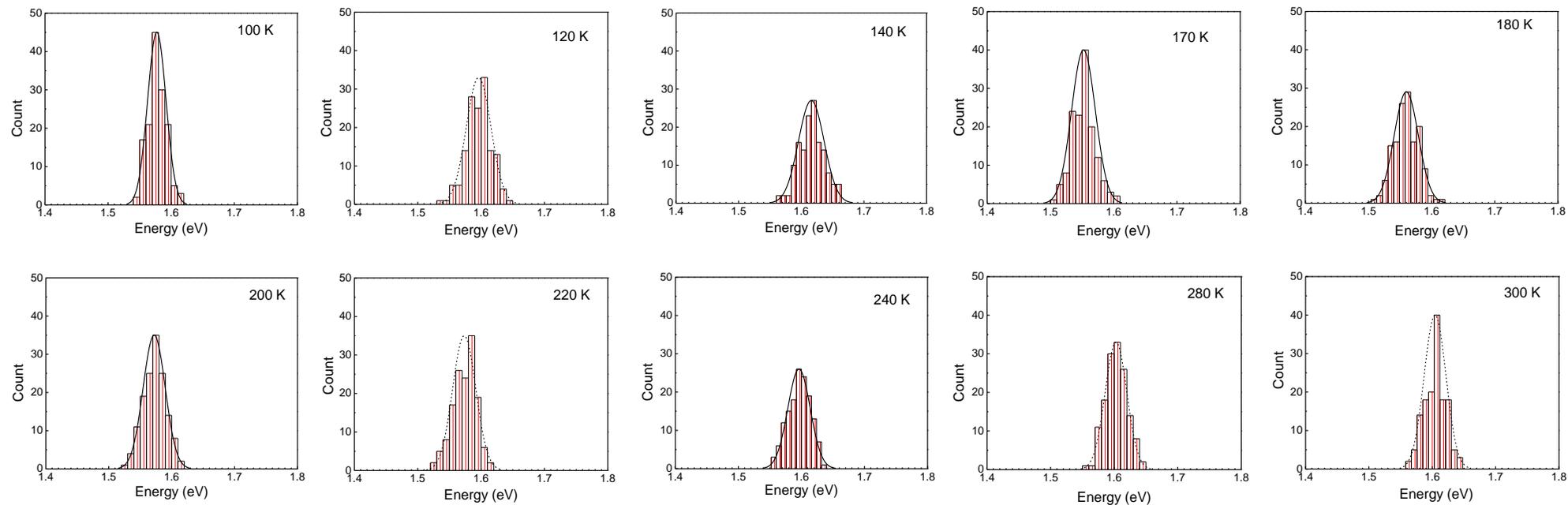


Figure S2. Bandgap histograms of $\text{CH}_3\text{NH}_3\text{PbI}_3$ at different temperatures from dI/dV measurements at many points on the ultrathin film.