

Synthesis of air-stable two-dimensional nanoplatelets of Ruddlesden-Popper organic-inorganic hybrid perovskites

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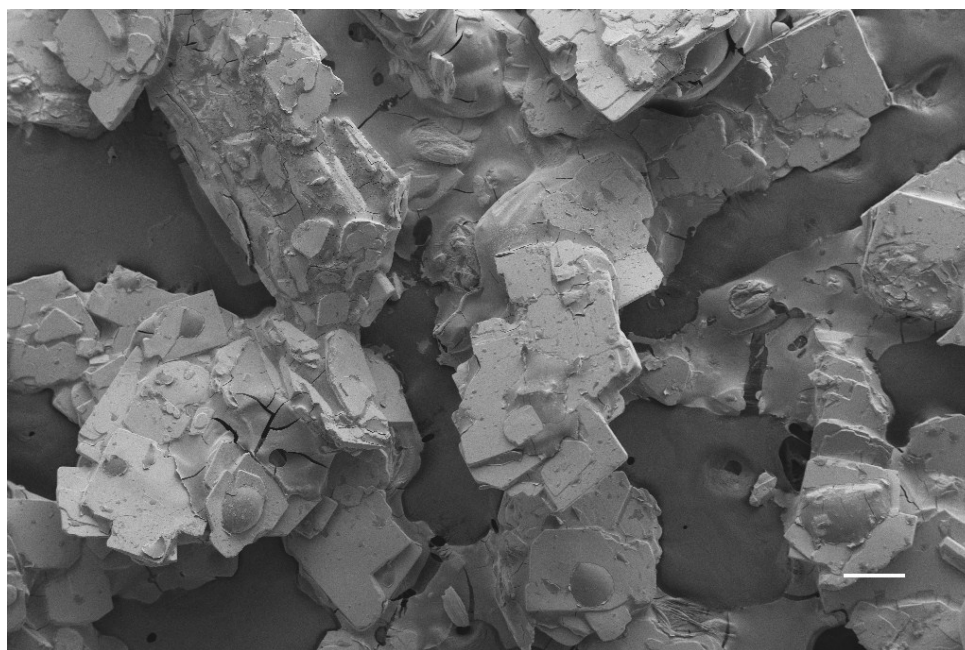


Fig. S1. SEM image of bulk 2D RP crystals, scale bar = 200 μ m.

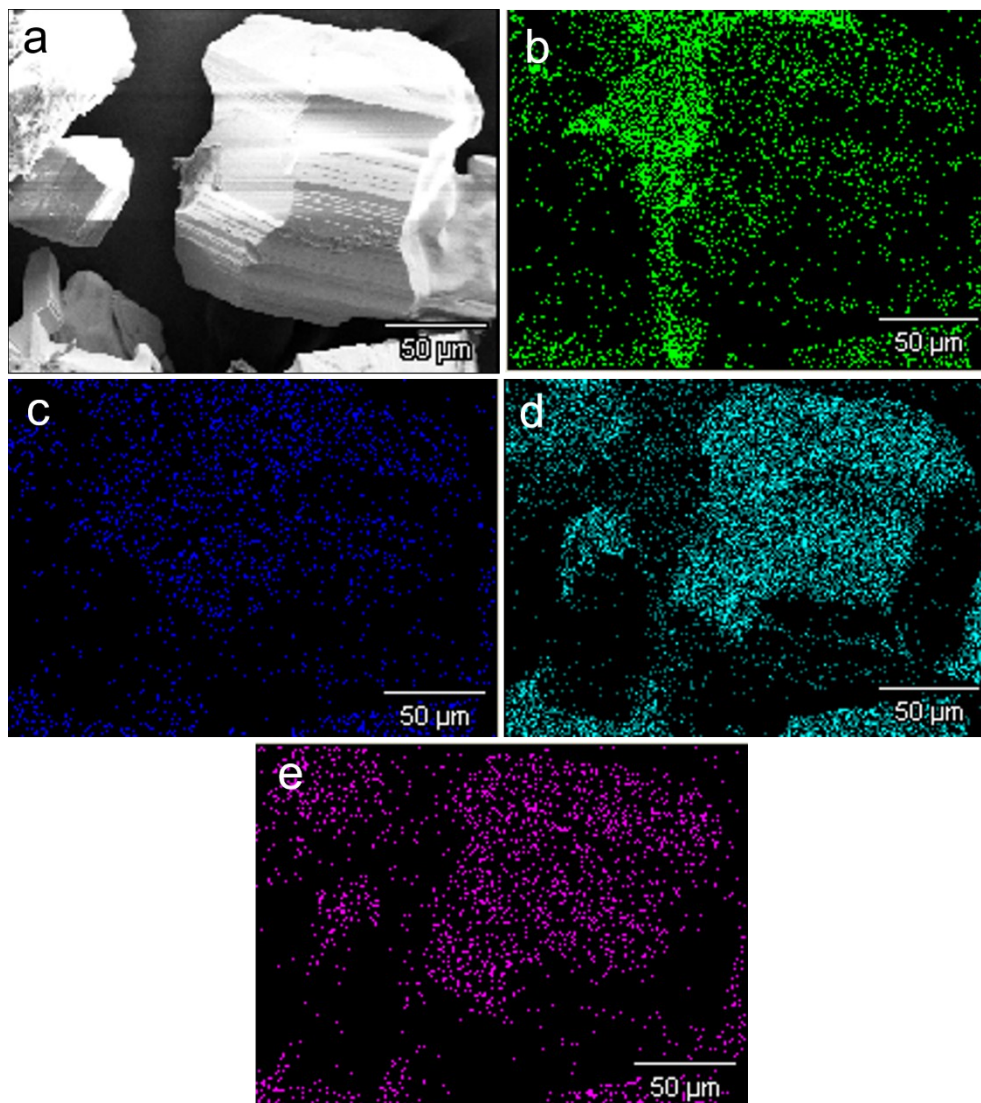


Fig. S2. EDX analysis of bulk 2D RP crystals. (a) SEM image of bulk 2D RP crystals used in the EDX elemental mapping of carbon (b), nitrogen (c), lead (d), and (e) iodine.

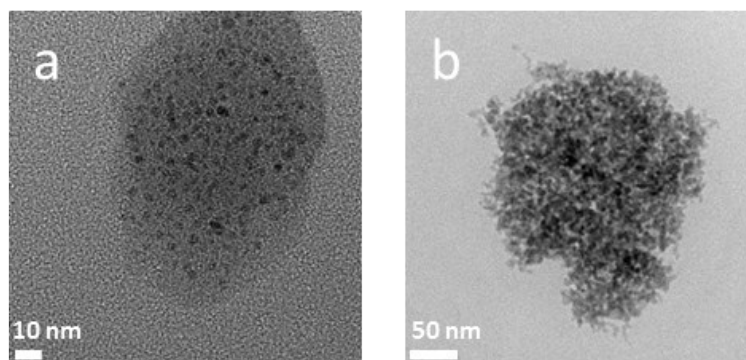


Fig. S3. TEM images of the quantum dots of 2D RP crystals prepared by (a) bath and (b) probe sonication methods, respectively.

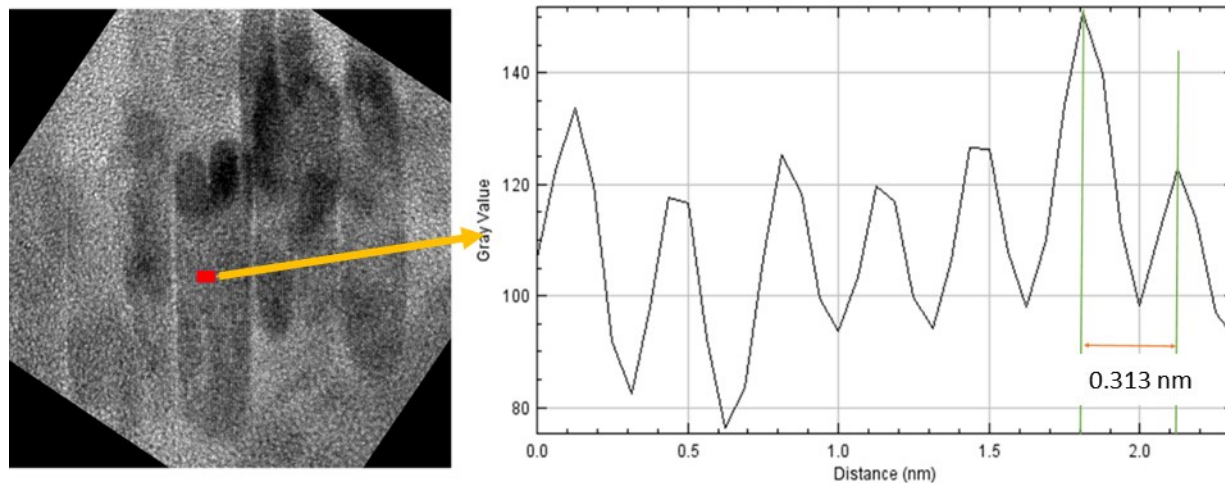
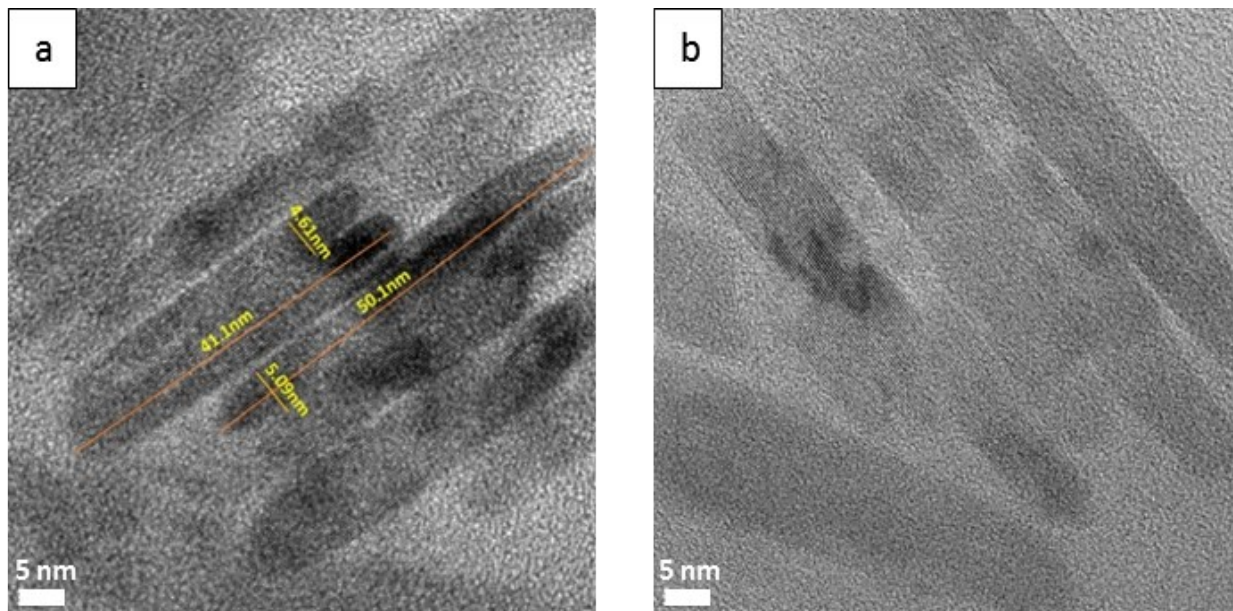


Fig. S4.(a,b) HRTEM images of the nanoplaclets (scale bar 5nm) showing lateral dimension and thickness, (c) profile analysis of the HRTEM image showing d-value of 0.313nm corresponding to (222) plane of the 2D RP sample.

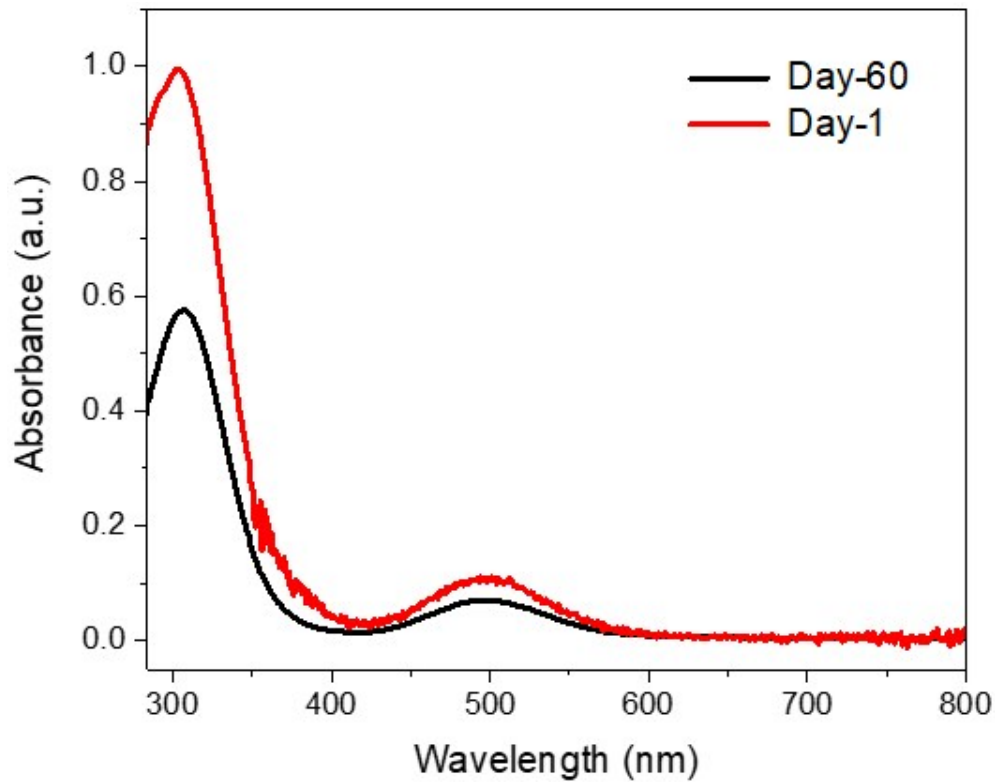


Fig. S5. UV-visible absorption spectrum of 2D RP nanoplatelets on the first day of preparation and after 60 days.

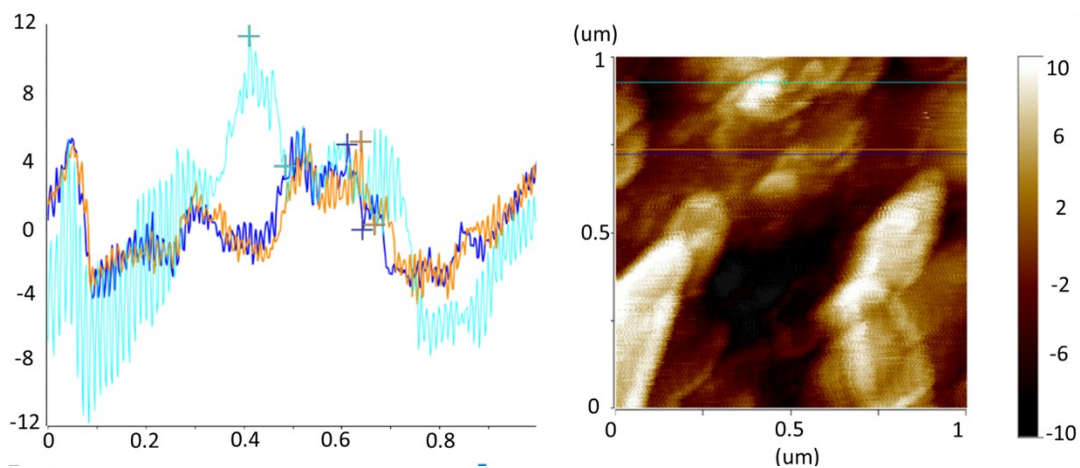


Fig. S6. Profile analysis of the AFM topography image showing the thickness of nanoplatelets around 5nm.