

LAYERED ORGANIC-INORGANIC PEROVSKITES HAVING METAL-DEFICIENT INORGANIC FRAMEWORKS

ABSTRACT

An organic-inorganic perovskite having alternating layers of an inorganic anion layer and an organic cation layer is provided. More particularly, the inorganic anion layer of the organic-inorganic perovskite has a trivalent or higher valent metal halide framework and the organic cation layer has a plurality of organic cations capable of templating the metal-deficient inorganic anion layers within the perovskite structure. Methods of preparing the organic-inorganic perovskite according to the present invention are also provided.

Fig. 1a