

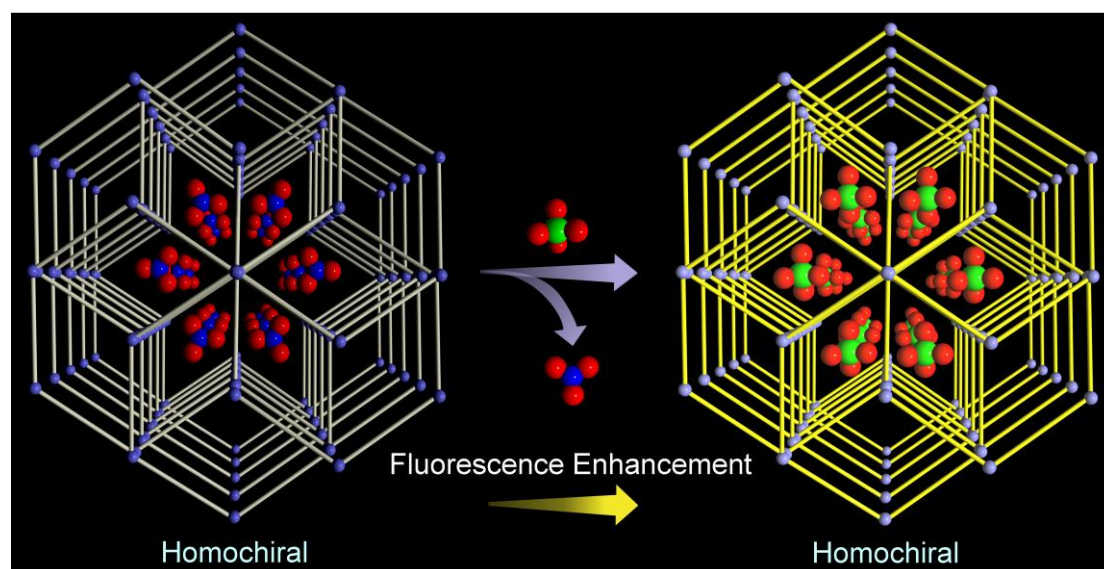
Anion-Responsive Tunable Bulk Phase Homochirality and Luminescence of a Cationic Framework

Biplab Manna, Biplab Joarder, Aamod V.Desai, Avishek Karmakar and Sujit K.Ghosh*

Indian Institute of Science Education & Research (IISER), Pune

Dr. Homi Bhabha Road, Pashan, Pune-411008 (India).

Abstract



Schematic representation of anion-induced fluorescence enhancement in a SCSC manner from compound $1 \supset \text{NO}_3^-$ (left) to compound $1 \supset \text{ClO}_4^-$ (right).

A homochiral cationic framework has been synthesized from a achiral ligand, which shows bulk phase homochirality. The overall framework showed six-fold interwoven helical packing. The anions in the framework can be quantitatively exchanged with other non coordinating or weakly coordinating anions. Interestingly, the cationic framework exhibited anion-responsive tunable bulk phase homochirality. The compound also showed anion driven tunable luminescence behavior.