

Recent advances in metal–organic frameworks based on pyridylbenzoate ligands: properties and applications

Gift Mehlana,* Vitalis Chitsa and Tawanda Mugadza

Abstract

In this mini review, a summary of metal–organic frameworks (MOFs) assembled using 3-(4-pyridyl) benzoate (34pba) and 4-(4-pyridyl)benzoate (44pba) is presented. These materials exhibit interesting properties such as negative and positive thermal expansion, breathing behaviour, solvatochromism/ vapochromism, thermochromism luminescence and exceptional iodine capture. Throughout the review we discuss the properties exhibited by MOFs constructed from the 44pba and 34pba linkers and we also highlight some of the exceptional behaviour of these materials.