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(54) **METAL-ORGANIC FRAMEWORK COMPOSITE WITH NANO METAL-ORGANIC FRAMEWORKS EMBEDDED IN HOST METAL-ORGANIC FRAMEWORK, METHOD FOR PRODUCING THE METAL-ORGANIC FRAMEWORK COMPOSITE AND GAS STORAGE INCLUDING THE METAL-ORGANIC FRAMEWORK COMPOSITE**

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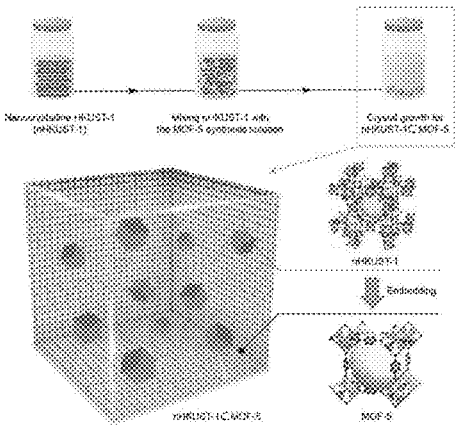
(57) **ABSTRACT**

Disclosed is a metal-organic framework composite including a host metal-organic framework, and nano metal-organic frameworks embedded in the host metal-organic framework. The host metal-organic framework and the nana metal-organic frameworks include different metals and organic ligands. The metal-organic framework composite has a structure in which the nano metal-organic frameworks are embedded in the host metal-organic framework. Due to this structure, defects are formed at the interfaces between the host metal-organic framework and the nano metal-organic frameworks, enabling the application of the metal-organic framework composite to gas storages with greatly improved gas storage efficiency. The metal-organic framework com-

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