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(54) **METHOD FOR THE CONTROLLED STORAGE AND RELEASE OF GASES USING AN ELECTROCHEMICALLY PRODUCED CRYSTALLINE, POROUS, ORGANOMETALLIC SKELETON MATERIAL**

(75) Inventors: **Ulrich Mueller**, Neustadt (DE); **Hermann Puetter**, Neustadt (DE); **Michael Hesse**, Worms (DE); **Markus Schubert**, Ludwigshafen (DE); **Helge Wessel**, Mannheim (DE); **Juergen Huff**, Ludwigshafen (DE); **Marcus Guzmann**, Muehlhausen (DE)

(73) Assignee: **BASF Aktiengesellschaft**, Ludwigshafen (DE)

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See application file for complete search history.

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Primary Examiner—Frank M Lawrence
(74) *Attorney, Agent, or Firm*—Oblon, Spivak, McClelland, Maier & Neustadt, P.C.

(57) **ABSTRACT**

The present invention relates to a method of absorbing and/or storing gases, in which the gas to be stored is brought into contact with an electrochemically prepared metal-organic framework under conditions suitable for absorption of the gas, with absorption of the gas into the metal-organic framework occurring, and, if appropriate, the conditions are subsequently changed so that release of the stored gas occurs.

20 Claims, 5 Drawing Sheets