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(54) Title: GRAPHENE-METAL CHALCOGENIDE POROUS MATERIAL

(57) Abstract: A method of preparing a graphene-metal chalcogenide porous material is provided. The method includes providing a dispersion comprising graphene oxide; adding a metal precursor and a chalcogenide precursor to the dispersion to form a mixture; heating the mixture under hydrothermal conditions to form a gel; and freeze drying the gel to obtain the graphene-metal chalcogenide porous material. A graphene-metal chalcogenide porous material prepared by the method, and use of the material in water treatment, energy storage, fire proofing, batteries or supercapacitors are also provided.

