



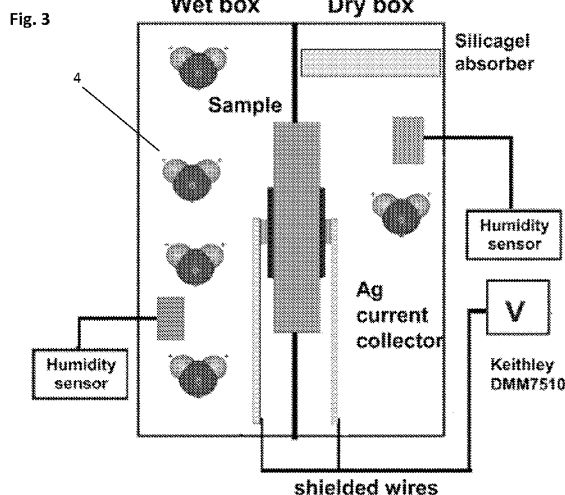
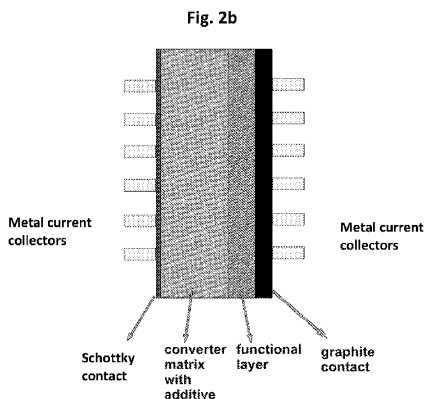
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(54) Title: MATERIALS, MANUFACTURING METHOD AND DEVICE FOR CONVERTING AMBIENT HUMIDITY TO ELEC-
TRICAL ENERGY AND USES THEREOF



(57) Abstract: The present disclosure relates to a modular converter for continuous conversion of water vapor into electricity comprising: a porous matrix comprising compressed metal oxide nanopowder, wherein the porous matrix, is covered from first side by the functional layer, which partially may infuse in the porous matrix, preferably an aluminum phosphate; a layer of carbon electrode, preferably a layer of graphite on the active layer, metal or carbon current collectors on carbon electrode layer and layer of metal Au, Ag, Al, Cu, Fe, Zn, Mg, Li, Ni, Co, Ti, Zr, Sn, Cr, Y, Nb, Mo, Rd, Pt, Cd, Hf, Ta, W, C or their alloys. Schottky contact on the second side of the converter; and metal or carbon current collectors, on the layer of Schottky contact, wherein the second surface of the converter is directly opposite the first surface of the converter.

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