



(51) International Patent Classification:

B01J 20/06 (2006.01) **B01D 53/02** (2006.01)
B01J 20/08 (2006.01) **B01D 53/64** (2006.01)
B01J 20/32 (2006.01) **C10G 25/00** (2006.01)

(21) International Application Number:

PCT/GB2010/051318

(22) International Filing Date:

10 August 2010 (10.08.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0914272.0 17 August 2009 (17.08.2009) GB

(71) Applicant (for all designated States except US): **JOHNSON MATTHEY PLC** [GB/GB]; 5th Floor, 25 Farringdon Street, London EC4A 4AB (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **FISH, Andrew** [GB/GB]; 3 Abbots Way, Fairfield, Stockton on Tees, Cleveland TS19 7SR (GB). **CHALLIS, Lucy Jane** [GB/GB]; Greystones, Milton Avenue, Bishop Auckland, County Durham DL14 6AN (GB). **COUSINS, Matthew John** [GB/GB]; 234 Greenbank Road, Darlington County, Durham DL3 6ES (GB). **FEAVIOUR, Mark Robert** [GB/GB]; 9 Shackleton Way, Woodley, Reading, Berkshire RG5 4UU (GB). **WAGLAND, Alison Mary** [GB/GB]; 27 Spring Lane, Watlington, Oxford, Oxfordshire OX49 5QN (GB).

(74) Agent: **RIDLAND, John**; Johnson Matthey Catalysts, PO Box 1, Belasis Avenue, Billingham, Cleveland TS23 1LB (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: SORBENT

(57) Abstract: A method is described for preparing a sorbent composition, comprising the steps of: (i) applying, from a solution or a slurry, a layer of a copper compound on the surface of a support material, and (ii) drying the coated support material, wherein the thickness of the copper compound layer on the dried support is in the range 1-200µm. The precursor may be converted to a sorbent suitable for removing heavy metals from liquids or gases by applying one or more sulphur compounds to sulphide the copper compound and form CuS.

