

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
16 July 2009 (16.07.2009)

PCT

(10) International Publication Number
WO 2009/086584 A1

(51) International Patent Classification:
C02F 9/14 (2006.01) *C02F 101/16* (2006.01)
C02F 3/00 (2006.01)

(74) Agent: WRAYS; Ground Floor, 56 Ord Street, West Perth,
Western Australia 6005 (AU).

(21) International Application Number:
PCT/AU2008/001886

(22) International Filing Date:
19 December 2008 (19.12.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2008900044 4 January 2008 (04.01.2008) AU

(71) Applicant (for all designated States except US): MURDOCH UNIVERSITY [AU/AU]; Commercialisation Office, South Street, Murdoch, Western Australia 6150 (AU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): HUGHES, Leonie Jane [AU/AU]; South Street, Murdoch, Western Australia 6150 (AU). CORD-RUWISCH, Ralf [DE/AU]; South Street, Murdoch, Western Australia 6150 (AU).

(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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— with international search report

(54) Title: BIOLOGICAL NITROGEN REMOVAL

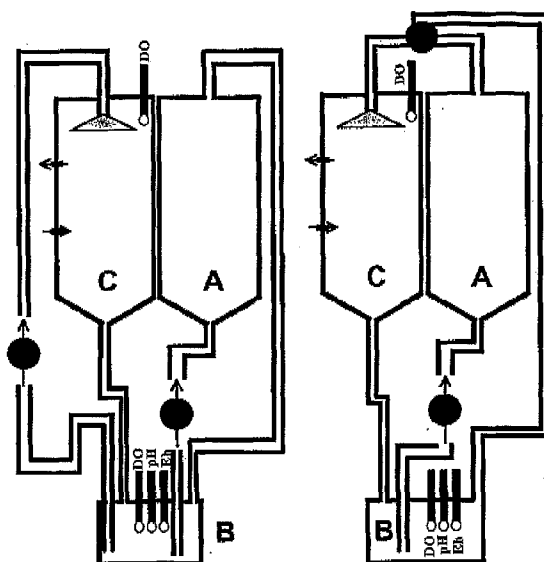


Figure 2

(57) Abstract: The present invention relates to a method of treating a liquid to extract at least one of carbon, sulphur, nitrogen or phosphate from liquids such as waste water. Preferably, the invention is employed to remove nitrogen from waste water. In an alternate for the invention provides a wastewater treatment system.

WO 2009/086584 A1