Scopus profile (01.81-02.22): 156 Publications, 2977 citations, h-factor: 28
Google patents profile: 20 Patents

In all the publications cited DWA was either the initiator, primary supervisor or research coordinator.

Top twenty selected Publications

1. Multifunctional reactors

Agar, D.W. (1999) *'Multifunctional reactors: Old preconceptions and new dimensions'*, Chemical Engineering Science, 54(10):1299–1305.

Elsner, M.P., Menge, M., Müller, C., Agar, D.W. (2003) *'The Claus process: Teaching an old dog new tricks'*, Catalysis Today, 79-80:487–494.

Lawrence, P.S., Grünewald, M., Dietrich, W., Agar, D.W. (2006) *'Optimal distribution of catalyst and adsorbent in an adsorptive reactor at the reactor level'*, Industrial and Engineering Chemistry Research, 45(14):4911–4917.

Hussainy, M., Agar, D.W. (2018) *'Modeling and optimization of the cyclic steady state operation of adsorptive reactors'*, Chinese Journal of Chemical Engineering, 26(6):1321–1329.

2. Slug-flow capillary reactors

Dummann, G., Quittmann, U., Gröschel, L., Agar, D.W., Wörz, O., Morgenschweis, K. (2003) *'The capillary-microreactor: A new reactor concept for the intensification of heat and mass transfer in liquid-liquid reactions'*, Catalysis Today, 79-80: 433–439.

Kashid, M.N., Gerlach, I., Goetz, S., Franzke, J., Acker, J.F., Platte, F., Agar, D.W., Turek, S. (2005) *'Internal circulation within the liquid slugs of a liquid-liquid slug-flow capillary microreactor'*, Industrial and Engineering Chemistry Research, 44(14):5003–5010.

Ghaini, A., Kashid, M.N., Agar, D.W. (2010*) 'Effective interfacial area for mass transfer in the liquid-liquid slug flow capillary microreactors'*, Chemical Engineering and Processing: Process Intensification, 49(4):358–366.

Ufer, A., Sudhoff, D., Mescher, A., Agar, D.W. (2011) '*Suspension catalysis in a liquid-liquid capillary microreactor'*, Chemical Engineering Journal, 167(2-3):468–474.

Scheiff, F., Mendorf, M., Agar, D., Reis, N., MacKley, M. (2011) *'The separation of immiscible liquid slugs within plastic microchannels using a metallic hydrophilic sidestream'*, Lab on a Chip, 11(6):1022–1029.

Arsenjuk, L., von Vietinghoff, N., Gladius, A.W., Agar, D.W. (2020) *'Actively homogenizing fluid distribution and slug length of liquid-liquid segmented flow in parallelized microchannels'*, Chemical Engineering and Processing - Process Intensification, 156:108061.

3. Other process intensification

Grünewald, M., Agar, D.W. (2004) *'Intensification of regenerative heat exchange in chemical reactors using desorptive cooling'*, Industrial and Engineering Chemistry Research, 43(16):4773–4779.

Schmitt, C., Agar, D.W., Platte, F., Buijssen, S., Pawlowski, B., Duisberg, M. (2005) *'Ceramic plate heat exchanger for heterogeneous gas-phase reactions'*, Chemical Engineering and Technology, 28(3):337–343.

Brkljac, B., Bludowsky, T., Dietrich, W., Grünewald, M., Agar, D.W. (2007) *'Modelling of unsteady-state hydrodynamics in periodically operated trickle-bed reactors: Influence of the liquid-phase physical properties'*, Chemical Engineering Science, 62(24):7011–7019.

4. CO_2 removal

Zhang, J., Misch, R., Tan, Y., Agar, D.W. (2011) *'Novel thermomorphic biphasic amine solvents for CO_2 absorption and low-temperature extractive regeneration'*, Chemical Engineering and Technology, 34(9):1481–1489.

Horstmeier, J.F., Gomez Lopez, A., Agar, D.W. (2016) *'Performance improvement of vacuum swing adsorption processes for CO_2 removal with integrated phase change material'*, International Journal of Greenhouse Gas Control, 47:364–375.

Drechsler, C., Agar, D.W. (2020) *'Intensified integrated direct air capture - power-to-gas process based on H_2O and CO_2 from ambient air'*, Applied Energy, 273:115076.

5. Methane pyrolysis

Kreysa, G., Agar, D.W., Schultz, I. (2010) *'Decarbonisation of fossil energy via methane pyrolysis'*. DGMK Tagungsbericht, 2010(3):31–38.

Schultz, I., Agar, D.W. (2015) *'Decarbonisation of fossil energy via methane pyrolysis using two reactor concepts: Fluid wall flow reactor and molten metal capillary reactor'*, International Journal of Hydrogen Energy, 40(35):11422–11427.

González Rebordinos, J., Salten, A.H.J., Agar, D.W. (2017) *'BrOx cycle: A novel process for CO_2-free energy production from natural gas'*, International Journal of Hydrogen Energy, 42(7):4710–4720.

6. Other

Lohse, S., Kohnen, B.T., Janasek, D., Dittrich, P.S,.Franzke, J., Agar, D.W. (2008) *'A novel method for determining residence time distribution in intricately structured microreactors'*, Lab on a Chip, 8(3):431–438.

Top patent choice

Agar, D.W., Tan, Y.H., Zhang, X. (2008) *'Separating carbon dioxide from gas mixtures'*, Patent US85700079B2, Filed: 31.07.2008, Published: 18.11.2010.