References

[1] M. Shamsudduha, G. Joseph, S.S. Haque, M.R. Khan, A. Zahid, K.M.U. Ahmed, Multi-hazard Groundwater Risks to Water Supply from Shallow Depths: Challenges to Achieving the Sustainable Development Goals in Bangladesh, Expo Health 12 (2020). https://doi.org/10.1007/s12403-019-00325-9.

[2] N. Alfarrah, K. Walraevens, Groundwater overexploitation and seawater intrusion in coastal areas of arid and semi-arid regions, Water (Switzerland) 10 (2018). https://doi.org/10.3390/w10020143.

[3] S. Badaruddin, A.D. Werner, L.K. Morgan, Water table salinization due to seawater intrusion, Water Resour Res 51 (2015). https://doi.org/10.1002/2015WR017098.

[4] C.T. DeGroot, A.G. Straatman, Towards a porous media model of the human lung, AIP Conf Proc 1453 (2011). https://doi.org/10.1063/1.4711155.

[5] V. Koulich, J.L. Lage, C.C.W. Hsia, R.L. Johnson, A porous medium model of alveolar gas diffusion, J Porous Media 2 (1999). https://doi.org/10.1615/JPorMedia.v2.i3.40.

[6] F. Kuwahara, Y. Sano, J. Liu, A. Nakayama, A porous media approach for bifurcating flow and mass transfer in a human lung, J Heat Transfer 131 (2009). https://doi.org/10.1115/1.3180699.

[7] N. Avilés-Rojas, D.E. Hurtado, Whole-lung finite-element models for mechanical ventilation and respiratory research applications, Front Physiol 13 (2022). https://doi.org/10.3389/fphys.2022.984286.

[8] C. Nicholson, Diffusion and related transport mechanisms in brain tissue, Reports on Progress in Physics 64 (2001). https://doi.org/10.1088/0034-4885/64/7/202.

[9] A.R.A. Khaled, K. Vafai, The role of porous media in modeling flow and heat transfer in biological tissues, Int J Heat Mass Transf 46 (2003). https://doi.org/10.1016/S0017-9310(03)00301-6.

[10] J. Siepmann, F. Siepmann, Modeling of diffusion controlled drug delivery, Journal of Controlled Release 161 (2012). https://doi.org/10.1016/j.jconrel.2011.10.006.

[11] R. Zevenhoven, J. Fagerlund, J.K. Songok, CO2 mineral sequestration: Developments toward large-scale application, Greenhouse Gases: Science and Technology 1 (2011). https://doi.org/10.1002/ghg3.7.

[12] S. Kalam, T. Olayiwola, M.M. Al-Rubaii, B.I. Amaechi, M.S. Jamal, A.A. Awotunde, Carbon dioxide sequestration in underground formations: review of experimental, modeling, and field studies, J Pet Explor Prod Technol (2020). https://doi.org/10.1007/s13202-020-01028-7.

[13] T.L. Rashwan, M.A. Asad, I.L. Molnar, M. Behazin, P.G. Keech, M.M. Krol, Exploring the governing transport mechanisms of corrosive agents in a Canadian deep geological repository, Science of the Total Environment 828 (2022). https://doi.org/10.1016/j.scitotenv.2022.153944.

[14] B. Amaziane, M. El Ossmani, M. Jurak, Numerical simulation of gas migration through engineered and geological barriers for a deep repository for radioactive waste, in: Comput Vis Sci, 2012. https://doi.org/10.1007/s00791-013-0196-1.

[15] R.J. Blackwell, J.R. Rayne, W.M. Terry, Factors Influencing the Efficiency of Miscible Displacement, Transactions of the AIME 217 (1959). https://doi.org/10.2118/1131-g.

[16] M. Gamal Rezk, J. Foroozesh, Uncertainty effect of CO2 molecular diffusion on oil recovery and gas storage in underground formations, Fuel 324 (2022). https://doi.org/10.1016/j.fuel.2022.124770.

[17] R.E. Hayes, A. Fadic, J. Mmbaga, A. Najafi, CFD modelling of the automotive catalytic converter, in: Catal Today, 2012. https://doi.org/10.1016/j.cattod.2012.03.015.

[18] T. Starý, O. Šolcová, P. Schneider, M. Marek, Effective diffusivities and pore-transport characteristics of washcoated ceramic monolith for automotive catalytic converter, Chem Eng Sci 61 (2006). https://doi.org/10.1016/j.ces.2006.05.014.

[19] N. Djordjevic, P. Habisreuther, N. Zarzalis, Experimental study on the basic phenomena of flame stabilization mechanism in a porous burner for premixed combustion application, in: Energy and Fuels, 2012. https://doi.org/10.1021/ef3013008.

[20] S.R. Addamane, M. Hajilou, E.L. Belmont, Experimental and analytical study of a porous media reformer with passive air entrainment, Int J Hydrogen Energy 41 (2016). https://doi.org/10.1016/j.ijhydene.2016.05.035.

[21] C.H. Bedingfield, T.B. Drew, Analogy between Heat Transfer and Mass Transfer, Ind Eng Chem 42 (1950). https://doi.org/10.1021/ie50486a029.

[22] J. Wilk, Heat/mass transfer analogy in the case of convective fluid flow through minichannels, International Journal of Thermal Sciences 156 (2020). https://doi.org/10.1016/j.ijthermalsci.2020.106467.

[23] H. Brenner, D. Edwards, Macrotransport processes, 1st edition, Butterworth-Heinemann, Boston, 1993.

[24] H. Brenner, Dispersion Resulting from Flow through Spatially Periodic Porous Media, Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences 297 (1980) 81–133. https://doi.org/10.1098/rsta.1980.0205.

[25] M. Shapiro, H. Brenner, Dispersion of a chemically reactive solute in a spatially periodic model of a porous medium, Chem Eng Sci 43 (1988) 551–571. https://doi.org/10.1016/0009-2509(88)87016-7.

[26] H. Brenner, P.M. Adler, Dispersion Resulting from Flow through Spatially Periodic Porous Media II. Surface and Intraparticle Transport, Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences 307 (1982) 149–200. https://doi.org/10.1098/rsta.1982.0108.

[27] D.A. Edwards, M. Shapiro, H. Brenner, Dispersion and reaction in two-dimensional model porous media, Physics of Fluids A: Fluid Dynamics 5 (1993) 837. https://doi.org/10.1063/1.858631.

[28] D.A. Edwards, M. Shapiro, H. Brenner, M. Shapira, Dispersion of inert solutes in spatially periodic, two-dimensional model porous media, Transp Porous Media 6 (1991) 337–358. https://doi.org/10.1007/BF00136346.

[29] S. Whitaker, Advances in theory of fluid motion in porous media, Ind Eng Chem 61 (1969) 14–28. https://doi.org/10.1021/ie50720a004.

[30] S. Whitaker, Diffusion and dispersion in porous media, AIChE Journal 13 (1967). https://doi.org/10.1002/aic.690130308.

[31] S. Whitaker, The transport equations for multi-phase systems, Chem Eng Sci 28 (1973) 139–147. https://doi.org/10.1016/0009-2509(73)85094-8.

[32] D. Ryan, R.G. Carbonell, S. Whitaker, THEORY OF DIFFUSION AND REACTION IN POROUS MEDIA., in: AIChE Symposium Series, 1981.

[33] F.J. Valdés-Parada, D. Lasseux, S. Whitaker, Upscaling Reactive Transport Under Hydrodynamic Slip Conditions in Homogeneous Porous Media, Water Resour Res 56 (2020). https://doi.org/10.1029/2019WR025954.

[34] F.J. Valdés-Parada, D. Lasseux, S. Whitaker, Diffusion and heterogeneous reaction in porous media: The macroscale model revisited, International Journal of Chemical Reactor Engineering 15 (2017). https://doi.org/10.1515/ijcre-2017-0151.

[35] W. Cole, N. Gates, T. Mai, D. Greer, P. Das, 2019 Standard Scenarios Report: A U.S. Electricity Sector Outlook, National Renewable Energy Laboratory (2019). https://www.nrel.gov/docs/fy20osti/74110.pdf.

[36] W. Wang, Q. Luo, B. Li, X. Wei, L. Li, Z. Yang, Recent Progress in Redox Flow Battery Research and Development, Adv Funct Mater 23 (2013) 970–986. https://doi.org/10.1002/adfm.201200694.

[37] J. Newman, W. Tiedemann, Porous-electrode theory with battery applications, AIChE Journal 21 (1975) 25–41. https://doi.org/10.1002/aic.690210103.

[38] W. Lai, F. Ciucci, Mathematical modeling of porous battery electrodes—Revisit of Newman's model, Electrochim Acta 56 (2011) 4369–4377. https://doi.org/10.1016/j.electacta.2011.01.012.

[39] M.A. Hamid, K.C. Smith, A bottom-up, multi-scale theory for transient mass transport of redox-active species through porous electrodes beyond the pseudo-steady limit, J Power Sources 565 (2023) 232756. https://doi.org/10.1016/J.JPOWSOUR.2023.232756.

[40] M.A. Hamid, K.C. Smith, Modeling the Transient Effects of Pore-Scale Convection and Redox Reactions in the Pseudo-Steady Limit, J Electrochem Soc 167 (2020) 013521. https://doi.org/10.1149/2.0212001jes.

[41] K.Eric. Livo, K. Watson, Analysis of MASTER Thermal Data in the Greeley Area of the Front Range Urban Corridor, Colorado—Delineation of Sites for Infrastructure Resource Characterization, U.S. Geological Survey Bulletin 2196, Reston, Virginia, 2004.

[42] A. Costall, B. Harris, J.P. Pigois, Electrical Resistivity Imaging and the Saline Water Interface in High-Quality Coastal Aquifers, Surv Geophys 39 (2018). https://doi.org/10.1007/s10712-018-9468-0.

[43] X. Liu, S. Shanbhag, T. V. Bartholomew, J.F. Whitacre, M.S. Mauter, Cost Comparison of Capacitive Deionization and Reverse Osmosis for Brackish Water Desalination, ACS ES and T Engineering 1 (2021). https://doi.org/10.1021/acsestengg.0c00094.

[44] S.K. Patel, B. Lee, P. Westerhoff, M. Elimelech, The potential of electrodialysis as a cost-effective alternative to reverse osmosis for brackish water desalination, Water Res 250 (2024). https://doi.org/10.1016/j.watres.2023.121009.

[45] M.M. Generous, N.A.A. Qasem, U.A. Akbar, S.M. Zubair, Techno-economic assessment of electrodialysis and reverse osmosis desalination plants, Sep Purif Technol 272 (2021). https://doi.org/10.1016/j.seppur.2021.118875.

[46] A. Shrivastava, V.Q. Do, K.C. Smith, Efficient, Selective Sodium and Lithium Removal by Faradaic Deionization Using Symmetric Sodium Titanium Vanadium Phosphate Intercalation Electrodes, ACS Appl Mater Interfaces 14 (2022). https://doi.org/10.1021/acsami.2c03261.

[47] C. Xu, Z. Yang, X. Zhang, M. Xia, H. Yan, J. Li, H. Yu, L. Zhang, J. Shu, Prussian Blue Analogues in Aqueous Batteries and Desalination Batteries, Nanomicro Lett 13 (2021). https://doi.org/10.1007/s40820-021-00700-9.

[48] M. Gao, W. Xiao, L. Miao, Z. Yang, W. Liang, T. Ao, Q. Yang, W. Chen, Prussian blue and its analogs: A robust platform for efficient capacitive deionization, Desalination 574 (2024). https://doi.org/10.1016/j.desal.2023.117278.

[49] V.Q. Do, E.R. Reale, I.C. Loud, P.G. Rozzi, H. Tan, D.A. Willis, K.C. Smith, Embedded, micro-interdigitated flow fields in high areal-loading intercalation electrodes towards seawater desalination and beyond, Energy Environ Sci 16 (2023). https://doi.org/10.1039/d3ee01302b.

[50] E.R. Reale, L. Regenwetter, A. Agrawal, B. Dardón, N. Dicola, S. Sanagala, K.C. Smith, Low porosity, high areal-capacity Prussian blue analogue electrodes enhance salt removal and thermodynamic efficiency in symmetric Faradaic deionization with automated fluid control, Water Res X 13 (2021). https://doi.org/10.1016/j.wroa.2021.100116.

[51] J. Anderson Jr, Fundamentals of Aerodynamics, 2001. https://doi.org/10.1036/0072373350.

[52] B. Zhao, H. Sun, X. Shi, M. Qi, S. Guo, Investigation of using multi-shockwave system instead of single normal shock for improving radial inflow turbine reliability, Int J Heat Fluid Flow 71 (2018). https://doi.org/10.1016/j.ijheatfluidflow.2018.03.018.

[53] R. Srivastava, T.G. Keith, Influence of shock wave on turbomachinery blade row flutter, J Propuls Power 21 (2005). https://doi.org/10.2514/1.5325.

[54] Y. Zhu, P. Jiang, Experimental and analytical studies on the shock wave length in convergent and convergent-divergent nozzle ejectors, Energy Convers Manag 88 (2014). https://doi.org/10.1016/j.enconman.2014.09.023.

[55] W. Huang, H. Wu, Y. guang Yang, L. Yan, S. bin Li, Recent advances in the shock wave/boundary layer interaction and its control in internal and external flows, Acta Astronaut 174 (2020). https://doi.org/10.1016/j.actaastro.2020.05.001.

[56] B.H.K. Lee, Oscillatory shock motion caused by transonic shock boundary-layer interaction, AIAA Journal 28 (1990). https://doi.org/10.2514/3.25144.

[57] B.H.K. Lee, Self-sustained shock oscillations on airfoils at transonic speeds, Progress in Aerospace Sciences 37 (2001). https://doi.org/10.1016/S0376-0421(01)00003-3.

[58] S. Rashid, F. Nawaz, A. Maqsood, S. Salamat, R. Riaz, Review of wave drag reduction techniques: Advances in active, passive, and hybrid flow control, Proc Inst Mech Eng G J Aerosp Eng 236 (2022). https://doi.org/10.1177/09544100211069796.