

References

- [1] World Energy Resources, in: World Energy Council, 2016, pp. 14.
- [2] W.D.H. Tissot B.P., "Petroleum Formation and Occurrence, 2nd Edition, Springer-Verlag, Berlin," Springer-Verlag, Berlin, 1984, 2nd Edition.
- [3] J. Lodungi, D. Alfred, A. Khirulthzam, F. Adnan, S. Tellichandran, "A Review in Oil Exploration and Production Waste Discharges According to Legislative and Waste Management Practices Perspective in Malaysia," *International Journal of Waste Resources*, 2017, 07.
- [4] G. Hu, J. Li, G. Zeng, "Recent development in the treatment of oily sludge from petroleum industry: a review," *Journal of hazardous materials*, 2013, 261 470-490.
- [5] Z. Yang, L. Wang, J. Niu, J. Wang, Z. Shen, "Pollution assessment and source identifications of polycyclic aromatic hydrocarbons in sediments of the Yellow River Delta, a newly born wetland in China," *Environmental Monitoring and Assessment*, 2008, 158 561.
- [6] W. Schwartz, "B. P. Tissot and D. H. Welte, Petroleum Formation and Occurrence. A new Approach to Oil and Gas Exploration. XVIII + 538 S., 241 Abb., 70 Tab. Berlin-Heidelberg-New York 1978. Springer-Verlag. DM 79,00," *Zeitschrift für allgemeine Mikrobiologie*, 1980, 20 428-428.
- [7] A.A.M. Abd El-Hamid, H.A. Abu Khoziem, "Physical and chemical characterization of El Kriymat boiler ash to optimize the leachability of some valuable elements," *J. Environ. Chem. Eng.*, 2019, 7 103362.
- [8] A. Coelho, A.V. Castro, M. Dezotti, G.L. Sant'Anna, "Treatment of petroleum refinery sourwater by advanced oxidation processes," *J. Hazard. Mater.*, 2006, 137 178-184.
- [9] L. Yu, M. Han, F. He, "A review of treating oily wastewater," *Arab. J. Chem.*, 2017, 10 1913-1922.
- [10] S. Jafarinejad, 1-Introduction to the Petroleum Industry, in: S. Jafarinejad (Ed.) *Petroleum Waste Treatment and Pollution Control*, Butterworth-Heinemann, 2017, pp. 1-17.
- [11] G. Hu, J. Li, X. Zhang, Y. Li, "Investigation of waste biomass co-pyrolysis with petroleum sludge using a response surface methodology," *Journal of Environmental Management*, 2017, 192 234-242.
- [12] P.F. Andrade, T.F. Azevedo, I.F. Gimenez, A.G. Souza Filho, L.S. Barreto, "Conductive carbon-clay nanocomposites from petroleum oily sludge," *Journal of hazardous materials*, 2009, 167 879-884.
- [13] Y. Wang, B. Dong, Y. Fan, Y. Hu, X. Zhai, C. Deng, Y. Xu, D. Shen, X. Dai, "Nitrogen transformation during pyrolysis of oilfield sludge with high polymer content," *Chemosphere*, 2019, 219 383-389.
- [14] L.J. da Silva, F.C. Alves, F.P. de França, "A review of the technological solutions for the treatment of oily sludges from petroleum refineries," *Waste Management & Research*, 2012, 30 1016-1030.
- [15] R.A. Tahhan, T.G. Ammari, S.J. Goussous, H.I. Al-Shdaifat, "Enhancing the biodegradation of total petroleum hydrocarbons in oily sludge by a modified bioaugmentation strategy," *International Biodeterioration & Biodegradation*, 2011, 65 130-134.
- [16] J. Jasmine, S. Mukherji, "Characterization of oily sludge from a refinery and biodegradability assessment using various hydrocarbon degrading strains and reconstituted consortia," *Journal of Environmental Management*, 2015, 149 118-125.
- [17] B.H. Diya'uddeen, W.M.A.W. Daud, A.R. Abdul Aziz, "Treatment technologies for petroleum refinery effluents: A review," *Process Saf. Environ. Prot.*, 2011, 89 95-105.
- [18] S.J. Connellan, "Lung diseases associated with hydrocarbon exposure," *Respiratory Medicine*, 2017, 126 46-51.
- [19] G.D. Osweiler, "Overview of Petroleum Product Poisoning," *Veterinary Diagnostic and Production Animal Medicine*, College of Veterinary Medicine, Iowa State University, 2020.
- [20] G.o. India, "The Environment (Protection) Act," 1986.

- [21] S. Cheng, F. Chang, F. Zhang, T. Huang, K. Yoshikawa, H. Zhang, "Progress in thermal analysis studies on the pyrolysis process of oil sludge," *Thermochimica Acta*, 2018, 663 125-136.
- [22] H.M. Saleh, H.R. Moussa, H.H. Mahmoud, F.A. El-Saied, M. Dawoud, R.S.A. Wahed, "Potential of the submerged plant *Myriophyllum spicatum* for treatment of aquatic environments contaminated with stable or radioactive cobalt and cesium," *Progress in Nuclear Energy*, 2020, 118 103147.
- [23] J. DeZuane, "Handbook of Drinking Water Quality (2nd ed.)," John Wiley and Sons, 1997.
- [24] M.M. Momeni, D. Kahforoushan, F. Abbasi, S. Ghanbarian, "Using Chitosan/CHPATC as coagulant to remove color and turbidity of industrial wastewater: Optimization through RSM design," *J. Environ. Manage.*, 2018, 211 347-355.
- [25] M. El-Naas, M. Alhaija, A.-Z. Sulaiman, "Evaluation of a three-step process for the treatment of petroleum refinery wastewater," *Journal of Environmental Chemical Engineering*, 2014, 2 56–62.
- [26] D.u. Hasan, D. Wan, A.A. Abdul Raman, "Treatment technologies for petroleum refinery effluents: A review," *Process Saf. Environ. Prot.*, 2012, 89 95-105.
- [27] L.J. da Silva, F.C. Alves, F.P. de França, "A review of the technological solutions for the treatment of oily sludges from petroleum refineries," *Waste Manag. Res.*, 2012, 30 1016-1030.
- [28] M.H. El-Naas, S. Al-Zuhair, M.A. Alhaija, "Reduction of COD in refinery wastewater through adsorption on date-pit activated carbon," *J. Hazard. Mater.*, 2010, 173 750-757.
- [29] B. Singh, P. Kumar, "Pre-treatment of petroleum refinery wastewater by coagulation and flocculation using mixed coagulant: Optimization of process parameters using response surface methodology (RSM)," *Journal of Water Process Engineering*, 2020, 36 101317.
- [30] A. Garg, I.M. Mishra, S. Chand, "Thermochemical Precipitation as a Pretreatment Step for the Chemical Oxygen Demand and Color Removal from Pulp and Paper Mill Effluent," *Ind. Eng. Che. Res.*, 2005, 44 2016-2026.
- [31] N.S.A. Mutamim, Z.Z. Noor, M.A.A. Hassan, A. Yuniarto, G. Olsson, "Membrane bioreactor: Applications and limitations in treating high strength industrial wastewater," *Chem. Eng. J.*, 2013, 225 109-119.
- [32] Y. Yavuz, A.S. Koparal, Ü.B. Öğütveren, "Treatment of petroleum refinery wastewater by electrochemical methods," *Desalination*, 2010, 258 201-205.
- [33] N. Jallouli, L.M. Pastrana-Martínez, A.R. Ribeiro, N.F.F. Moreira, J.L. Faria, O. Hentati, A.M.T. Silva, M. Ksibi, "Heterogeneous photocatalytic degradation of ibuprofen in ultrapure water, municipal and pharmaceutical industry wastewaters using a TiO₂/UV-LED system," *Chem. Eng. J.*, 2018, 334 976-984.
- [34] B.C. Hodges, E.L. Cates, J.-H. Kim, "Challenges and prospects of advanced oxidation water treatment processes using catalytic nanomaterials," *Nat. Nanotechnol.*, 2018, 13 642-650.
- [35] H. Diya'uddeen Basheer, A.R.A. Aziz, W.M.A.W. Daud, "On the Limitation of Fenton Oxidation Operational Parameters: A Review," in: *Int. J. Chem. React. Eng.*, 2012.
- [36] G. Nirmal, "Biological Treatment of Petrochemical Wastewater, Petroleum Chemicals - Recent Insight," 2018, Ch. 5.
- [37] S.M.R. Razavi, T. Miri, "A real petroleum refinery wastewater treatment using hollow fiber membrane bioreactor (HF-MBR)," *Journal of Water Process Engineering*, 2015, 8 136-141.
- [38] M.M. Rahman, M.H. Al-Malack, "Performance of a crossflow membrane bioreactor (CF-MBR) when treating refinery wastewater," *Desalination*, 2006, 191 16-26.
- [39] S. Vendramel, J.P. Bassin, M. Dezotti, G.L. Sant'Anna, "Treatment of petroleum refinery wastewater containing heavily polluting substances in an aerobic submerged fixed-bed reactor," *Environmental Technology*, 2015, 36 2052-2059.
- [40] Z. Dong, M. Lu, W. Huang, X. Xu, "Treatment of oilfield wastewater in moving bed biofilm reactors using a novel suspended ceramic biocarrier," *Journal of Hazardous Materials*, 2011, 196 123-130.
- [41] B.H. Diya'uddeen, W.M.A.W. Daud, A.R. Abdul Aziz, "Treatment technologies for petroleum refinery effluents: A review," *Process Safety and Environmental Protection*, 2011, 89 95-105.

- [42] P. Kumar, B. Prasad, I.M. Mishra, S. Chand, "Decolorization and COD reduction of dyeing wastewater from a cotton textile mill using thermolysis and coagulation," *J. Hazard. Mater.*, 2008, 153 635-645.
- [43] P. Kumar, B. Prasad, S. Chand, "Treatment of desizing wastewater by catalytic thermal treatment and coagulation," *J. Hazard. Mater.*, 2009, 163 433-440.
- [44] Q. Li, F. Li, A. Meng, Z. Tan, Y. Zhang, "Thermolysis of scrap tire and rubber in sub/supercritical water," *Waste Management*, 2018, 71 311-319.
- [45] C.M.S. da Silva, A.d.C.O. Carneiro, B.R. Vital, C.G. Figueiró, L.d.F. Fialho, M.A. de Magalhães, A.G. Carvalho, W.L. Cândido, "Biomass torrefaction for energy purposes – Definitions and an overview of challenges and opportunities in Brazil," *Renew. Sustain. Energy Rev.*, 2018, 82 2426-2432.
- [46] T.C. Hoffman, D.H. Zitomer, P.J. McNamara, "Pyrolysis of wastewater biosolids significantly reduces estrogenicity," *J. Hazard. Mater.*, 2016, 317 579-584.
- [47] J. Xu, J. Kou, L. Guo, H. Jin, Z. Peng, C. Ren, "Experimental study on oil-containing wastewater gasification in supercritical water in a continuous system," *Int. J. Hydrog. Energy*, 2019, 44 15871-15881.
- [48] Metcalf, amp, I. Eddy, *Wastewater engineering: treatment and reuse*, Fourth edition/ revised by George Tchobanoglous, Franklin L. Burton, H. David Stensel. Boston: McGraw-Hill, 2003.
- [49] J. Bratby, "Coagulation and Flocculation in Water and Wastewater Treatment – second Edition," 2006, 538.
- [50] M. Scholz, Chapter 7 - Coagulation and Flocculation, in: M. Scholz (Ed.) *Wetlands for Water Pollution Control (Second Edition)*, Elsevier, 2016, pp. 37-46.
- [51] E.A. Taiwo, J.A. Otolorin, "Oil Recovery from Petroleum Sludge by Solvent Extraction," *Petroleum Science and Technology*, 2009, 27 836-844.
- [52] S.B. Eskander, T.A. Bayoumi, H.M. Saleh, "Leaching behavior of cement-natural clay composite incorporating real spent radioactive liquid scintillator," *Progress in Nuclear Energy*, 2013, 67 1-6.
- [53] Q. Song, H. Zhao, J. Jia, F. Zhang, Z. Wang, W. Lv, L. Yang, W. Zhang, Y. Zhang, X. Shu, "Characterization of the products obtained by pyrolysis of oil sludge with steel slag in a continuous pyrolysis-magnetic separation reactor," *Fuel*, 2019, 255 115711.
- [54] E. Ferrarese, G. Andreottola, I.A. Oprea, "Remediation of PAH-contaminated sediments by chemical oxidation," *J. Hazard. Mater.*, 2008, 152 128-139.
- [55] J.R. Conner, S.L. Hoeffner, "A Critical Review of Stabilization/Solidification Technology," *Critical Reviews in Environmental Science and Technology*, 1998, 28 397-462.
- [56] H.M. Saleh, R.F. Aglan, H.H. Mahmoud, "Ludwigia stolonifera for remediation of toxic metals from simulated wastewater," *Chemistry and Ecology*, 2019, 35 164-178.
- [57] J.A. Marin, T. Hernandez, C. Garcia, "Bioremediation of oil refinery sludge by landfarming in semiarid conditions: Influence on soil microbial activity," *Environmental Research*, 2005, 98 185-195.
- [58] R.F. Hejazi, T. Husain, F.I. Khan, "Landfarming operation of oily sludge in arid region—human health risk assessment," *J. Hazard. Mater.*, 2003, 99 287-302.
- [59] C. Machín-Ramírez, A.I. Okoh, D. Morales, K. Mayolo-Deloisa, R. Quintero, M.R. Trejo-Hernández, "Slurry-phase biodegradation of weathered oily sludge waste," *Chemosphere*, 2008, 70 737-744.
- [60] J.A. Marín, J.L. Moreno, T. Hernández, C. García, "Bioremediation by Composting of Heavy Oil Refinery Sludge in Semiarid Conditions," *Biodegradation*, 2006, 17 251-261.
- [61] S. Singh, J.P. Chakraborty, M.K. Mondal, "Optimization of process parameters for torrefaction of *Acacia nilotica* using response surface methodology and characteristics of torrefied biomass as upgraded fuel," *Energy*, 2019, 186 115865.
- [62] S. Singh, J.P. Chakraborty, M.K. Mondal, "Torrefaction of woody biomass (*Acacia nilotica*): investigation of fuel and flow properties to study its suitability as a good quality solid fuel," *Renewable Energy*, 2020.

- [63] S. Singh, J. Prasad Chakraborty, M. Kumar Mondal, "Intrinsic kinetics, thermodynamic parameters and reaction mechanism of non-isothermal degradation of torrefied *Acacia nilotica* using isoconversional methods," *Fuel*, 2020, 259 116263.
- [64] P. Kumar, B. Prasad, I.M. Mishra, S. Chand, "Catalytic thermal treatment of desizing wastewaters," *J. Hazard. Mater.*, 2007, 149 26-34.
- [65] A.K. Prajapati, P.K. Chaudhari, B. Mazumdar, R. Choudhary, "Catalytic thermal treatment (catalytic thermolysis) of a rice grain-based biodigester effluent of an alcohol distillery plant," *Environmental Technology*, 2015, 36 2548-2555.
- [66] A. Garg, I.M. Mishra, S. Chand, "Thermochemical Precipitation as a Pretreatment Step for the Chemical Oxygen Demand and Color Removal from Pulp and Paper Mill Effluent," *Ind. Eng. Chem. Res.*, 2005, 44 2016-2026.
- [67] P.K. Chaudhari, I.M. Mishra, S. Chand, "Effluent treatment for alcohol distillery: Catalytic thermal pretreatment (catalytic thermolysis) with energy recovery," *Chemical Engineering Journal*, 2008, 136 14-24.
- [68] C.X.-H. Su, T.-T. Teng, Y.-S. Wong, N. Morad, M. Rafatullah, "Catalytic thermolysis in treating Cibacron Blue in aqueous solution: Kinetics and degradation pathway," *Chemosphere*, 2016, 146 503-510.
- [69] O. Sahu, "Catalytic thermal pre-treatments of sugar industry wastewater with metal oxides: Thermal treatment," *Experimental Thermal and Fluid Science*, 2017, 85 379-387.
- [70] P. Kumar, R. Agnihotri, M.K. Mondal, "Catalytic treatment of synthetic dye wastewater: COD and color reduction," *Journal of Environmental Chemical Engineering*, 2013, 1 440-447.
- [71] O. Sahu, "Thermo-chemical treatment of agro industry effluent by aluminum salt: Degradation of chemical oxygen demand and color," *Engineering in Agriculture, Environment and Food*, 2019, 12 162-172.
- [72] S. Verma, B. Prasad, I. Mishra, "Thermochemical Treatment (Thermolysis) of Petrochemical Wastewater: COD Removal Mechanism and Floc Formation," *Ind. Eng. Che. Res.*, 2011.
- [73] O.S. Amuda, I.A. Amoo, "Coagulation/flocculation process and sludge conditioning in beverage industrial wastewater treatment," *Journal of Hazardous Materials*, 2007, 141 778-783.
- [74] F. Sher, A. Malik, H. Liu, "Industrial polymer effluent treatment by chemical coagulation and flocculation," *Journal of Environmental Chemical Engineering*, 2013, 1 684-689.
- [75] H.A. Aziz, S. Alias, M.N. Adlan, Faridah, A.H. Asaari, M.S. Zahari, "Colour removal from landfill leachate by coagulation and flocculation processes," *Bioresource Technology*, 2007, 98 218-220.
- [76] G.S. Simate, S.E. Iyuke, S. Ndlovu, M. Heydenrych, "The heterogeneous coagulation and flocculation of brewery wastewater using carbon nanotubes," *Water Research*, 2012, 46 1185-1197.
- [77] P.D. Johnson, P. Girinathannair, K.N. Ohlinger, S. Ritchie, L. Teuber, J. Kirby, "Enhanced Removal of Heavy Metals in Primary Treatment Using Coagulation and Flocculation," *Water Environment Research*, 2008, 80 472-479.
- [78] V. Golob, A. Vinder, M. Simonič, "Efficiency of the coagulation/flocculation method for the treatment of dyebath effluents," *Dyes and Pigments*, 2005, 67 93-97.
- [79] A.J. Hargreaves, P. Vale, J. Whelan, L. Alibardi, C. Constantino, G. Dotro, E. Cartmell, P. Campo, "Impacts of coagulation-flocculation treatment on the size distribution and bioavailability of trace metals (Cu, Pb, Ni, Zn) in municipal wastewater," *Water Research*, 2018, 128 120-128.
- [80] A.L. Ahmad, S. Ismail, S. Bhatia, "Optimization of Coagulation–Flocculation Process for Palm Oil Mill Effluent Using Response Surface Methodology," *Environmental Science & Technology*, 2005, 39 2828-2834.
- [81] A.Y. Zahrim, Z.D. Dexter, C.G. Joseph, N. Hilal, "Effective coagulation-flocculation treatment of highly polluted palm oil mill biogas plant wastewater using dual coagulants: Decolourisation, kinetics and phytotoxicity studies," *Journal of Water Process Engineering*, 2017, 16 258-269.

- [82] M.A. Martín, I. González, M. Berrios, J.A. Siles, A. Martín, "Optimization of coagulation–flocculation process for wastewater derived from sauce manufacturing using factorial design of experiments," *Chemical Engineering Journal*, 2011, 172 771-782.
- [83] G.L. Dotto, G.S. Rosa, M.A. Moraes, R.F. Weska, L.A.A. Pinto, "Treatment of chitin effluents by coagulation–flocculation with chitin and aluminum sulfate," *Journal of Environmental Chemical Engineering*, 2013, 1 50-55.
- [84] J.-P. Wang, Y.-Z. Chen, Y. Wang, S.-J. Yuan, H.-Q. Yu, "Optimization of the coagulation-flocculation process for pulp mill wastewater treatment using a combination of uniform design and response surface methodology," *Water Research*, 2011, 45 5633-5640.
- [85] M. Ariffin, M. Hassan, T. Li, Z. Zainon Noor, "Coagulation and Flocculation Treatment of Wastewater in Textile Industry Using Chitosan," *Journal of Chemical and Natural Resources Engineering*, 2009, 4 43-53.
- [86] N. Birjandi, H. Younesi, N. Bahramifar, S. Ghafari, A.A. Zinatizadeh, S. Sethupathi, "Optimization of coagulation-flocculation treatment on paper-recycling wastewater: Application of response surface methodology," *Journal of Environmental Science and Health, Part A*, 2013, 48 1573-1582.
- [87] G. Di Bella, M.G. Giustra, G. Freni, "Optimisation of coagulation/flocculation for pre-treatment of high strength and saline wastewater: Performance analysis with different coagulant doses," *Chemical Engineering Journal*, 2014, 254 283-292.
- [88] S. Verma, B. Prasad, I. Mishra, "Pretreatment of petrochemical wastewater by coagulation and flocculation and the sludge characteristics," *J. Hazard. Mater.*, 2010, 178 1055-1064.
- [89] C.E. Santo, V.J.P. Vilar, C.M.S. Botelho, A. Bhatnagar, E. Kumar, R.A.R. Boaventura, "Optimization of coagulation–flocculation and flotation parameters for the treatment of a petroleum refinery effluent from a Portuguese plant," *Chem. Eng. J.*, 2012, 183 117-123.
- [90] Y. Zeng, C. Yang, J. Zhang, W. Pu, "Feasibility investigation of oily wastewater treatment by combination of zinc and PAM in coagulation/flocculation," *Journal of Hazardous Materials*, 2007, 147 991-996.
- [91] N. Birjandi, H. Younesi, N. Bahramifar, S. Ghafari, A.A. Zinatizadeh, S. Sethupathi, "Optimization of coagulation-flocculation treatment on paper-recycling wastewater: Application of response surface methodology," *J. Environ. Sci. Health A*, 2013, 48 1573-1582.
- [92] M. Ahmed, A. Idris, S. Omar, "Physicochemical characterization of compost of the industrial tannery sludge," *Journal of Engineering Science and Technology Journal of Engineering Science and Technology*, 2007, 2.
- [93] H. Patel, S. Pandey, "PHYSICO-CHEMICAL CHARACTERISATION OF TEXTILE CHEMICAL SLUDGE GENERATED FROM VARIOUS CETPS IN INDIA," *Physico-chemical characterization of textile chemical sludge from various CETPs in India*, 2008, 2.
- [94] A.D. Andreadakis, "Physical and chemical properties of activated sludge floc," *Water Research*, 1993, 27 1707-1714.
- [95] X. Zhang, H. Zeng, Q. Wang, J. Li, C. Ma, "Sludge predation by aquatic worms: Physicochemical characteristics of sewage sludge and implications for dewaterability," *Journal of Cleaner Production*, 2020, 258 120612.
- [96] O. Gulnaz, S. Saygideger, E. Kusvuran, "Study of Cu(II) biosorption by dried activated sludge: effect of physico-chemical environment and kinetics study," *Journal of Hazardous Materials*, 2005, 120 193-200.
- [97] I. El-Nahhal, H. Al-Najar, Y. El-Nahhal, "Physicochemical Properties of Sewage Sludge from Gaza," *International Journal of Geosciences*, 2014, 5 586-594.
- [98] D.T. Sponza, "Investigation of extracellular polymer substances (EPS) and physicochemical properties of different activated sludge flocs under steady-state conditions," *Enzyme and Microbial Technology*, 2003, 32 375-385.
- [99] X.-T. He, T.J. Logan, S.J. Traina, "Physical and Chemical Characteristics of Selected U.S. Municipal Solid Waste Composts," *Journal of Environmental Quality*, 1995, 24 543-552.

- [100] A. Pevere, G. Guibaud, E. Goin, E. van Hullebusch, P. Lens, "Effects of physico-chemical factors on the viscosity evolution of anaerobic granular sludge," *Biochemical Engineering Journal*, 2009, 43 231-238.
- [101] T. Robledo-Mahón, M.A. Martín, M.C. Gutiérrez, M. Toledo, I. González, E. Aranda, A.F. Chica, C. Calvo, "Sewage sludge composting under semi-permeable film at full-scale: Evaluation of odour emissions and relationships between microbiological activities and physico-chemical variables," *Environmental Research*, 2019, 177 108624.
- [102] X. Li, L. Chen, Y. Ji, M. Li, B. Dong, G. Qian, J. Zhou, X. Dai, "Effects of chemical pretreatments on microplastic extraction in sewage sludge and their physicochemical characteristics," *Water Research*, 2020, 171 115379.
- [103] X.-W. Liu, G.-P. Sheng, H.-Q. Yu, "Physicochemical characteristics of microbial granules," *Biotechnology Advances*, 2009, 27 1061-1070.
- [104] J. Zhang, J. Zhang, Y. Tian, N. Li, L. Kong, L. Sun, M. Yu, W. Zuo, "Changes of physicochemical properties of sewage sludge during ozonation treatment: Correlation to sludge dewaterability," *Chemical Engineering Journal*, 2016, 301 238-248.
- [105] Y.-M. Zheng, H.-Q. Yu, G.-P. Sheng, "Physical and chemical characteristics of granular activated sludge from a sequencing batch airlift reactor," *Process Biochemistry*, 2005, 40 645-650.
- [106] L.H. Mikkelsen, K. Keiding, "Physico-chemical characteristics of full scale sewage sludges with implications to dewatering," *Water Research*, 2002, 36 2451-2462.
- [107] M. Aldoury, "Treatment of oily sludge using solvent extraction," *Petroleum Science and Technology*, 2019, 37 1-7.
- [108] A.A. Fauzi, A. Arsad, M.A. Ahmad Zaini, M.A. Md Yunus, "Extraction of oil from filter cake sludge using soxhlet extraction," *Journal of Engineering and Applied Sciences*, 2016, 11 2561-2565.
- [109] G. Hu, J. Li, G. Zeng, "Recent development in the treatment of oily sludge from petroleum industry: A review," *J. Hazard. Mater.*, 2013, 261 470-490.
- [110] M. Wu, M. Mintz, M. Wang, S. Arora, "Water Consumption in the Production of Ethanol and Petroleum Gasoline," *Environ Manage*, 2009, 44 981.
- [111] S. Verma, B. Prasad, I.M. Mishra, "Thermochemical Treatment (Thermolysis) of Petrochemical Wastewater: COD Removal Mechanism and Floc Formation," *Ind. Eng. Che. Res.*, 2011, 50 5352-5359.
- [112] A. American Public Health, A. American Water Works, F. Water Environment, Standard methods for the examination of water and wastewater, APHA-AWWA-WEF, Washington, D.C., 1998.
- [113] W.-T. Chen, J. Ma, Y. Zhang, C. Gai, W. Qian, "Physical pretreatments of wastewater algae to reduce ash content and improve thermal decomposition characteristics," *Bioresource Technology*, 2014, 169 816-820.
- [114] J.H.A. Van Der Woude, P.L. De Bruyn, "Formation of colloidal dispersions from supersaturated iron(III) nitrate solutions. I. Precipitation of amorphous iron hydroxide," *Colloids Surf.*, 1983, 8 55-78.
- [115] C.M. Flynn, "Hydrolysis of inorganic iron(III) salts," *Chem. Rev.*, 1984, 84 31-41.
- [116] K.C. Lim-Seok, John L., "Temperature effects on flocculation kinetics using Fe(III) coagulant," *J Environ Eng* 1995, 121 893-901
- [117] G. Tari, S.M. Olhero, J.M.F. Ferreira, "Influence of Temperature on Stability of Electrostatically Stabilized Alumina Suspensions," *J. Colloid Interface Sci.*, 2000, 231 221-227.
- [118] N.J. Welham, K.A. Malatt, S. Vukcevic, "The effect of solution speciation on iron-sulphur-arsenic-chloride systems at 298 K," *Hydrometallurgy*, 2000, 57 209-223.
- [119] J.K. Edzwald, J.E. Tobiasson, "Enhanced coagulation: US requirements and a broader view," *Water Sci. Technol.*, 1999, 40 63-70.
- [120] H.-W. Ching, T.S. Tanaka, M. Elimelech, "Dynamics of coagulation of kaolin particles with ferric chloride," *Water Res.*, 1994, 28 559-569.

- [121] K.S. Finnie, D.J. Cassidy, J.R. Bartlett, J.L. Woolfrey, "IR Spectroscopy of Surface Water and Hydroxyl Species on Nanocrystalline TiO₂ Films," *Langmuir*, 2001, 17 816-820.
- [122] E. Smidt, K. Meissl, "The applicability of Fourier transform infrared (FT-IR) spectroscopy in waste management," *Waste Management*, 2007, 27 268-276.
- [123] E. Smidt, P. Lechner, M. Schwanninger, G. Haberhauer, M. Gerzabek, "Characterization of Waste Organic Matter by FT-IR Spectroscopy: Application in Waste Science," *Applied Spectroscopy*, 2002, 56 1170-1175.
- [124] S. Singh, J.P. Chakraborty, M.K. Mondal, "Torrefaction of woody biomass (*Acacia nilotica*): Investigation of fuel and flow properties to study its suitability as a good quality solid fuel," *Renewable Energy*, 2020, 153 711-724.
- [125] W. Chen, H. Zheng, H. Teng, Y. Wang, Y. Zhang, C. Zhao, Y. Liao, "Enhanced Coagulation-Flocculation Performance of Iron-Based Coagulants: Effects of PO₄(³⁻) and SiO₃(²⁻) Modifiers," *PLoS One*, 2015, 10 e0137116-e0137116.
- [126] Y. Fu, S.L. Yu, "Characterization and coagulation performance of solid poly-silicic-ferric (PSF) coagulant," *Journal of Non-Crystalline Solids*, 2007, 353 2206-2213.
- [127] J. Liu, L. Huang, X. Ning, J. Kuo, J. Sun, K. Chang, Y. Wang, J. Chen, J. Cheng, "Analysis of co-combustion characteristics of sewage sludge and water hyacinth," *Huanjing Kexue Xuebao/Acta Scientiae Circumstantiae*, 2016, 36 2955-2967.
- [128] B. Singh, P. Kumar, "Physicochemical characteristics of hazardous sludge from effluent treatment plant of petroleum refinery as feedstock for thermochemical processes," *Journal of Environmental Chemical Engineering*, 2020, 103817.
- [129] J. Li, J. Hu, T. Wang, J. Gan, J. Xie, Y. Shui, J. Liu, Y. Xue, "Thermogravimetric analysis of the co-combustion of residual petrochemical sludge and municipal sewage sludge," *Thermochimica Acta*, 2019, 673 60-67.
- [130] A.I. Vogel, *Vogel's qualitative inorganic analysis*, Longman Scientific & Technical ; Wiley, Harlow, Essex, England : New York, 1987.
- [131] L. Zhou, X. Jiang, J. Liu, "Characteristics of oily sludge combustion in circulating fluidized beds," *Journal of Hazardous Materials*, 2009, 170 175-179.
- [132] D.C.R. Espinosa, J.A.S. Tenório, "Thermal behavior of chromium electroplating sludge," *Waste Management*, 2001, 21 405-410.
- [133] C.G.o. India, "Ministry of environment and forests notification," *Petroleum oil refinery* 2008.
- [134] "BP Statistical Review of World Energy June 2018," 2018, 24.
- [135] "Environmental, Health, And Safety guidelines Petroleum Refining," *World Bank Group* 2016, Table 2 19.
- [136] Z. Daud, H. Awang, A.A.A. Latif, N. Nasir, M.B. Ridzuan, Z. Ahmad, "Suspended Solid, Color, COD and Oil and Grease Removal from Biodiesel Wastewater by Coagulation and Flocculation Processes," *Procedia - Social and Behavioral Sciences*, 2015, 195 2407-2411.
- [137] H. Altaher, E. ElQada, W. Omar, "Pretreatment of Wastewater Streams from Petroleum/Petrochemical Industries Using Coagulation," *Adv. Chem. Engineer. Sci.*, 2011, Vol.01No.04 7.
- [138] B. Tansel, J. Regula, "Coagulation enhanced centrifugation for treatment of petroleum hydrocarbon contaminated waters," *J. Environ. Sci. Health A*, 2000, 35 1557-1575.
- [139] M. Abolhasani Zeraatkar, A. Astarai, "Comparing Copper Sulfate, Aluminum Sulfate and Ferric Chloride in Removing Microbial and Organic Contaminations in Municipal Waste Latex," *Aust. J. Basic Appl. Sci.*, 2010, 4.
- [140] R.F.G. Robert L Mason, James L. Hess, "Statistical Design and Analysis of Experiments: With Applications to Engineering and Science, Second Edition," 2003, ISBN:9780471458500.
- [141] Q. Liao, G. Lin, "Reduced basis ANOVA methods for partial differential equations with high-dimensional random inputs," *J. Comput. Phys.*, 2016, 317 148-164.
- [142] "Hazardous Waste (Management & Handling) Rules, The Ministry of Environment & Forests " Govt. of India, Schedule 1 for oil refinery industry 1989

- [143] COLLECTION AND PRESERVATION OF SAMPLES (2017), in: Standard Methods For the Examination of Water and Wastewater, American Public Health Association, 2018.
- [144] J. Bratby, Coagulation and Flocculation in Water and Wastewater Treatment – Third Edition, in, IWA Publishing, 2016.
- [145] J. Leentvaar, T.S.J. Ywema, "Some dimensionless parameters of impeller power in coagulation-flocculation processes," *Water Res.*, 1980, 14 135-140.
- [146] I.A.W. Tan, A.L. Ahmad, B.H. Hameed, "Optimization of preparation conditions for activated carbons from coconut husk using response surface methodology," *Chem. Eng. J.*, 2008, 137 462-470.
- [147] D. Neubauer, "Statistical Design of Experiments With Engineering Applications," *Technometrics*, 2012, 50 90-91.
- [148] A. Dawood, Y. Li, "Modeling and Optimization of New Flocculant Dosage and pH for Flocculation: Removal of Pollutants from Wastewater," *Water*, 2013, 5 342-355.
- [149] W. Vonau, pH, in: P. Worsfold, C. Poole, A. Townshend, M. Miró (Eds.) *Encyclopedia of Analytical Science (Third Edition)*, Academic Press, Oxford, 2019, pp. 173-181.
- [150] A.I. Vogel, *Vogel textbook of quantitative chemical analysis, Fifth edition* / [revised by ... G.H. Jeffery ... [and others]. Harlow, Essex, England : Longman Scientific & Technical ; New York : Wiley, 1989., 1989.
- [151] A.E. Comyns, "Handbook of Copper Compounds and Applications. H.W. Richardson (ed.) Marcel Dekker, New York, 1997, 0-8247-8998-9," *Appl. Organomet. Chem.*, 2000, 14 174-175.
- [152] A.R. Kampf, "Handbook of Mineralogy, V. Borates, Carbonates, Sulfates. By John W. Anthony, Richard A. Bideaux, Kenneth W. Bladh, and Monte C. Nichols. Mineral Data Publishing, Tucson, Arizona; 2003," *Am. Mineral.*, 2003, 88 1842-1842.
- [153] C. Yin, Y. Huang, L. Zhang, H. Xu, Y. Zhong, Z. Mao, "Low-temperature bleaching of cotton fabric using a copper-based catalyst for hydrogen peroxide," *Color. Technol.*, 2015, 131 66-71.
- [154] F.-Z. Deng, A.-X. Zhu, R. Yang, "Study on preparation of CuO/Cu₂(OH)₃Cl powder and its spectrum behavior for photodegradation decoloration of dyes," *Guang pu xue yu guang pu fen xi = Guang pu*, 2006, 26 299-301.
- [155] J.D. Cuppett, S.E. Duncan, A.M. Dietrich, "Evaluation of Copper Speciation and Water Quality Factors That Affect Aqueous Copper Tasting Response," *Chem. Senses*, 2006, 31 689-697.
- [156] A. Philippe, G.E. Schaumann, "Interactions of Dissolved Organic Matter with Natural and Engineered Inorganic Colloids: A Review," *Environ. Sci. Technol.*, 2014, 48 8946-8962.
- [157] J.U. Grobbelaar, Turbidity, in: G.E. Likens (Ed.) *Encyclopedia of Inland Waters*, Academic Press, Oxford, 2009, pp. 699-704.
- [158] M. Kundu, T. Hasegawa, K. Terabe, K. Yamamoto, M. Aono, "Structural studies of copper sulfide films: effect of ambient atmosphere," *Sci. Technol. Adv. Mater.*, 2008, 9 035011.
- [159] L. Wu, Y. Li, S. Li, Z. Li, G. Tang, W. Qi, L. Xue, X. Ge, L. Ding, "Method for estimating ionicities of oxides using O1s photoelectron spectra," *AIP Advances*, 2015, 5 097210.
- [160] M. Ishfaq, M. Khan, M. Bhopal, F. Nasim, A. Ali, A. Bhatti, I. Ahmed, S. Bhardwaj, C. Cepek, "1.5 MeV proton irradiation effects on electrical and structural properties of TiO₂/n-Si interface," *J. Appl. Phys.*, 2014, 115 174506-174506.
- [161] D. Briggs, G. Beamson, "XPS studies of the oxygen 1s and 2s levels in a wide range of functional polymers," *Anal. Chem.*, 1993, 65 1517-1523.
- [162] J. Araujo, B. Archanjo, K. de Souza, W. Kwapinski, N. Falcão, E. Novotny, C. Achete, "Selective extraction of humic acids from an anthropogenic Amazonian dark earth and from a chemically oxidized charcoal," *Biol. Fert. Soils*, 2014, 50.
- [163] Y.J. Kim, C.R. Park, "Analysis of Problematic Complexing Behavior of Ferric Chloride with N,N-Dimethylformamide Using Combined Techniques of FT-IR, XPS, and TGA/DTG," *Inorg. Chem.*, 2002, 41 6211-6216.
- [164] A.P. Grosvenor, B.A. Kobe, M.C. Biesinger, N.S. McIntyre, "Investigation of multiplet splitting of Fe 2p XPS spectra and bonding in iron compounds," *Surf. Interface Anal.*, 2004, 36 1564-1574.

- [165] J. Gardy, A. Osatiashtiani, O. Céspedes, A. Hassanpour, X. Lai, A.F. Lee, K. Wilson, M. Rehan, "A magnetically separable SO₄/Fe-Al-TiO₂ solid acid catalyst for biodiesel production from waste cooking oil," *Appl. Catal. B Environ.*, 2018, 234 268-278.
- [166] C. Ma, W. Hu, H. Pei, H. Xu, R. Pei, "Enhancing integrated removal of *Microcystis aeruginosa* and adsorption of microcystins using chitosan-aluminum chloride combined coagulants: Effect of chemical dosing orders and coagulation mechanisms," *Colloids Surf. A*, 2016, 490 258-267.
- [167] Y. Zhang, Q. Zhao, J. Jiang, K. Wang, L. Wei, J. Ding, H. Yu, "Acceleration of organic removal and electricity generation from dewatered oily sludge in a bioelectrochemical system by rhamnolipid addition," *Bioresource Technology*, 2017, 243 820-827.
- [168] D. O'Rourke, S. Connolly, "Just oil ? the distribution of environmental and social impacts of oil production and consumption," *Annual Review of Environment and Resources*, 2003, 28 587-617.
- [169] S. Srikanth, M. Kumar, S.K. Puri, "Bio-electrochemical system (BES) as an innovative approach for sustainable waste management in petroleum industry," *Bioresource Technology*, 2018, 265 506-518.
- [170] Z. Ghasemi, H. Younesi, A.A. Zinatizadeh, "Kinetics and thermodynamics of photocatalytic degradation of organic pollutants in petroleum refinery wastewater over nano-TiO₂ supported on Fe-ZSM-5," *Journal of the Taiwan Institute of Chemical Engineers*, 2016, 65 357-366.
- [171] M.C. Martí, D. Camejo, N. Fernández-García, R. Rellán-Álvarez, S. Marques, F. Sevilla, A. Jiménez, "Effect of oil refinery sludges on the growth and antioxidant system of alfalfa plants," *Journal of Hazardous Materials*, 2009, 171 879-885.
- [172] J. Chen, L. Mu, J. Cai, P. Yao, X. Song, H. Yin, A. Li, "Pyrolysis and oxy-fuel combustion characteristics and kinetics of petrochemical wastewater sludge using thermogravimetric analysis," *Bioresource Technology*, 2015, 198 115-123.
- [173] C. Liu, J. Liu, G. Sun, W. Xie, J. Kuo, S. Li, J. Liang, K. Chang, S. Sun, M. Buyukada, F. Evrendilek, "Thermogravimetric analysis of (co-)combustion of oily sludge and litchi peels: combustion characterization, interactions and kinetics," *Thermochimica Acta*, 2018, 667 207-218.
- [174] P. Pánek, B. Kostura, I. Čepeláková, I. Koutník, T. Tomšej, "Pyrolysis of oil sludge with calcium-containing additive," *Journal of Analytical and Applied Pyrolysis*, 2014, 108 274-283.
- [175] T. Bayoumi, H. Saleh, S. Eskander, "Solidification of hot real radioactive liquid scintillator waste using cement-clay composite," *Monatshefte für Chemie-Chemical Monthly*, 2013, 144 1751-1758.
- [176] A. Karamalidis, E. Voudrias, "Leaching Behavior of Metals Released from Cement-Stabilized/Solidified Refinery Oily Sludge by Means of Sequential Toxicity Characteristic Leaching Procedure," *Journal of Environmental Engineering-asce - J ENVIRON ENG-ASCE*, 2008, 134.
- [177] A. Karamalidis, E. Voudrias, "Application of Stabilization/Solidification Technology on Oil Refinery Sludge Contaminated by Heavy Metals," *Journal of environmental science and health. Part A, Toxic/hazardous substances & environmental engineering*, 2004, 39 961-971.
- [178] F. Zhu, L. Zhao, Z. Zhang, H. Jiang, "Preliminary Study at Lipids Extraction Technology from Municipal Sludge by Organic Solvent," *Procedia Environmental Sciences*, 2012, 16 352-356.
- [179] J. Hu, J. Gan, J. Li, Y. Luo, G. Wang, L. Wu, Y. Gong, "Extraction of crude oil from petrochemical sludge: characterization of products using thermogravimetric analysis," *Fuel*, 2017, 188 166-172.
- [180] B. Lin, Q. Huang, Y. Yang, Y. Chi, "Preparation of Fe-char catalyst from tank cleaning oily sludge for the catalytic cracking of oily sludge," *Journal of Analytical and Applied Pyrolysis*, 2019, 139 308-318.
- [181] A.K. Karamalidis, V. Psycharis, I. Nicolis, E. Pavlidou, S. Bénazeth, E.A. Voudrias, "Characterization of stabilized/solidified refinery oily sludge and incinerated refinery sludge with cement using XRD, SEM and EXAFS," *Journal of Environmental Science and Health, Part A*, 2008, 43 1144-1156.
- [182] Z. Gong, A. Du, Z. Wang, Z. Bai, Z. Wang, "Analysis on integrated thermal treatment of oil sludge by Aspen Plus," *Waste Management*, 2019, 87 512-524.

- [183] J. Wang, T.-L. Liu, Q.-X. Huang, Z.-Y. Ma, Y. Chi, J.-H. Yan, "Production and characterization of high quality activated carbon from oily sludge," *Fuel Processing Technology*, 2017, 162 13-19.
- [184] J. Wang, C. Sun, B.-C. Lin, Q.-X. Huang, Z.-Y. Ma, Y. Chi, J.-H. Yan, "Micro- and mesoporous-enriched carbon materials prepared from a mixture of petroleum-derived oily sludge and biomass," *Fuel Processing Technology*, 2018, 171 140-147.
- [185] J.-W. Park, J.-C. Ahn, H. Song, K. Park, H. Shin, J.-s. Ahn, "Reduction characteristics of oily hot rolling mill sludge by direct reduced iron method," *Resources, Conservation and Recycling*, 2002, 34 129-140.