

Reference

Abdel-Halim SH, Shehata AM, El-Shahat MF. Removal of lead ions from industrial waste water by different types of natural materials. *Water Research*, 37(2003)1678-1683.

Abdul Jalill RD, Nuaman RS, Abd AN. Biological Synthesis of Titanium Dioxide Nanoparticles by Curcuma Longa Plant Extract and Study Its Biological Properties. *Wsn*, 49 (2016) 204–222.

Abisharani JM, Devikala S, Kumar RD, Arthanareeswari M, Kamaraj P. Green Synthesis of TiO₂ Nanoparticles Using Cucurbita Pepo Seeds Extract. *Materials Today: Proceedings*, 14(2019) 302–307.

Abu Bakar BH, Putrajaya R, Abdulaziz H. Malaysian Rice Husk Ash–Improving the Durability and Corrosion Resistance of Concrete: Pre-review . *Concrete Research Letters*, 1(2010)6-13.

Acharya J, Kumar U, Meikap B. Thermodynamic characterization of adsorption of lead (II) ions on activated carbon developed from tamarind wood from aqueous solution. *South African Journal of Chemical Engineering*, 18(2013)70-76.

Ahmed MA, El-Katori EE, Gharni ZH. Photocatalytic Degradation of Methylene Blue Dye Using Fe₂O₃/TiO₂ Nanoparticles Prepared by Sol-Gel Method. *Journal of Alloys and Compounds*, 553(2013) 19–29.

Ahmed AE, Adam F. The benzylation of benzene using aluminum, gallium and iron incorporated silica from rice husk ash. *Microporous and Mesoporous Materials*. 118(2009) 35–43.

Ajitha B, Reddy PS. Biosynthesis of silver nanoparticles using *Momordica charantia* leaf broth; evaluation of their innate antimicrobial and catalytic activities. *Journal of Photochemistry and Photobiology B: Biology*, 146(2015)1–9.

Akhtar MS, Panwar J, Yun YS. Biogenic Synthesis of Metallic Nanoparticles by Plant Extracts. *ACS Sustainable Chemistry & Engineering*, 1(2013) 591–602.

Allen NS, Mahdjoub N, Vishnyakov V, Kelly PJ, Kriek RJ. The effect of crystalline phase (anatase, brookite and rutile) and size on the photocatalytic activity of calcined polymorphic titanium dioxide (TiO₂). *Polymer Degradation and Stability*. 150(2018) 31–36.

Almeida SR, Elicker C, Vieira BM, Cabral TH, Silva AF, SanchesFilho PJ. Black SiO₂ nanoparticles obtained by pyrolysis of rice husk. *Dyes and Pigments*, 164(2019) 272–278.

Ambika S, Sundrarajan M. [EMIM] BF₄ Ionic Liquid-Mediated Synthesis of TiO₂ Nanoparticles Using *Vitex Negundo* Linn Extract and Its Antibacterial Activity. *Journal of Molecular Liquids*, 221(2016) 986–992.

Aminabhavi TM, Naidu BVK, Sridhar S, Rangarajan R. Pervaporation separation of water–isopropanol mixtures using polymeric membranes: modeling and simulation aspects. *Journal of Applied Polymer Science*, 95 (2005) 1143–1153.

Amutha K, Ravibaskar R, Sivakumar G. Extraction, Synthesis and Characterization of Nanosilica from Rice Husk Ash. *International Journal of Nanotechnology and Applications*, 4 (2010) 61–66.

Anderson C, Bard AJ. Improved photocatalytic activity and characterization of mixed $\text{TiO}_2/\text{SiO}_2$ and $\text{TiO}_2/\text{Al}_2\text{O}_3$ materials. *The Journal of Physical Chemistry B*, 101(1997) 2611-2616.

Anh TV, Truong NX, Chang HL. Preparation of mesoporous $\text{Fe}_2\text{O}_3 \cdot \text{SiO}_2$ composite from rice husk as an efficient heterogeneous Fenton-like catalyst for degradation of organic dyes. *Journal of Water Process Engineering*, 28(2019) 169–180.

Arif Z, Sethy NK, Kumari L, Mishra PK, Verma B. Green Synthesis of TiO_2 Nanoparticles Using *Cajanus Cajan* Extract and Their Use in Controlling the Fouling of Ultrafiltration PVDF Membranes. *Korean Journal of Chemical Engineering*, 36 (2019) 1148–1156.

Arif Z, Sethy NK, Mishra PK, Upadhyay SN, Verma B. Investigating the influence of sol gel derived PVA/ SiO_2 nano composite membrane on pervaporation separation of azeotropic mixture I. Effect of operating condition. *Journal of Porous Materials*, 25(2018) 1203-1211.

Atarod M, Nasrollahzadeh M, Mohammad Sajadi S. Euphorbia Heterophylla Leaf Extract Mediated Green Synthesis of Ag/TiO_2 Nanocomposite and Investigation of Its Excellent Catalytic Activity for Reduction of Variety of Dyes in Water. *Journal of Colloid and Interface Science*, 462(2016) 272–279.

Athinarayanan J, Periasamy VS, Alhazmi M, Alatiah HA, Alshatwi AA. Synthesis of biogenic silica nanoparticles from rice husks for biomedical applications. *Ceramics International*, 41 (2015) 275–281.

Ayyub P, Chandra R, Taneja P, Sharma AK, Pinto R. Synthesis of Nanocrystalline Material by Sputtering and Laser Ablation at Low Temperatures. *Applied*

Physics A: Materials Science and Processing, 73 (2001) 67–73.

Baccile N, Babonneau F, Thomas B, Coradin T. Introducing ecodesign in silica sol-gel materials. *Journal of Materials Chemistry*, 19(2009) 8537–8559.

Bai J, Fouda AE, Matsuura T, Hazlett JD. A study on the preparation and performance of polydimethylsiloxane-coated polyetherimide membranes in pervaporation. *Journal of Applied Polymer Science*, 48(1993)999-1008

Baughman RH, Zakhidov AA, De Heer WA. Carbon Nanotubes - The Route toward Applications. *Science*, 297 (2002) 787–792.

Bavanilatha M, Yoshitha L, Nivedhitha S, Sahithya S. Bioactive Studies of TiO₂ Nanoparticles Synthesized Using Glycyrrhiza Glabra. *Biocatalysis and Agricultural Biotechnology* 19(2019) 101131. <https://doi.org/10.1016/j.bcab.2019.101131>.

Behpour M, Ghoreishi SM, Mohammadi N. Corrosion Protection of Copper by TiO₂ Nanoparticles and SN Schiff Base Coating., *Journal of Nanostructures*, 2(2012) 317–326.

Bhattacharyya A, Kawi S, Ray MB. Photocatalytic degradation of organic II by TiO₂ catalysts supported on adsorbents. *Catalysis Today*, 98(2004) 431-439.

Bogart K, Ramirez S, Gonzales L, Bogart G. Deposition of SiO₂ films from novel alkoxysilane/O₂ plasmas. *Journal of Vacuum Science & Technology A*, 16(1998) 3175–3184.

Bogunia-Kubik K, Sugisaka M. From Molecular Biology to Nanotechnology and Nanomedicine. *BioSystems*, 65 (2002) 123–138.

Byrappa K, Ohara S, Adschiri T. Nanoparticles Synthesis Using Supercritical Fluid Technology - towards Biomedical Applications. *Advanced Drug Delivery Reviews*, 60 (2008) 299–327.

Canesi L, Ciacci C, Vallotto D, Gallo G, Marcomini A, Pojana G. In vitro effects of suspensions of selected nanoparticles (C₆₀ fullerene, TiO₂, SiO₂) on *Mytilus* hemocytes. *Aquatic Toxicology*, 96 (2010) 151–158.

Carp O, Huisman CL, Reller A. Photoinduced reactivity of titanium dioxide. *Progress in Solid State Chemistry*, 32 (2004) 33–177.

Chandra S. *Waste Materials Used in Concrete Manufacturing*. Noyes, Westwood, New Jersey, USA, 1996.

Chandrasekhar S, Pramada PN, Majeed J. Effect of calcination temperature and heating rate on the optical properties and reactivity of rice husk ash. *Journal of Materials Science*, 41(2006)7926–7933.

Chapman PD, Oliveira T, Livingston AG, Li K. Membranes for the dehydration of solvents by pervaporation. *Journal of Membrane Science*, 318(2008) 5–37.

Chatterjee A, Ajantha M, Talekar A, Revathy N, Abraham J. Biosynthesis, Antimicrobial and Cytotoxic Effects of Titanium Dioxide Nanoparticles Using *Vigna Unguiculata* Seeds. *International Journal of Pharmacognosy and Phytochemical Research*, 9 (2017) 95–99.

Chen S, Paulose M, Ruan C, Mor GK, Varghese OK, Kouzoudis D, Grimes CA. Electrochemically Synthesized CdS Nanoparticle-Modified TiO₂ Nanotube-Array Photoelectrodes: Preparation, Characterization, and Application to Photoelectrochemical Cells. *Journal of Photochemistry and Photobiology A*:

Chemistry, 177 (2006) 177–184.

Chen D, Ray AK. Removal of toxic metal ions from wastewater by semiconductor photocatalysis. *Chemical Engineering Science*, 56(2001)1561-1570.

Chen J, Zhang Li. NH_4Cl -assisted low temperature synthesis of anatase TiO_2 nanostructures from Ti powder. *Materials Letters*, 63(2009)1797–1799.

Chen S, Paulose M, Ruan C, Mor GK, Varghese OK, Kouzoudis D, Grimes CA. Electrochemically Synthesized CdS Nanoparticle-Modified TiO_2 Nanotube-Array Photoelectrodes: Preparation, Characterization, and Application to Photoelectrochemical Cells. *Journal of Photochemistry and Photobiology A: Chemistry*, 177 (2006) 177–184.

Chen SH, Liou RM, Lai CL, Hung MY, Tsai MH, Huang SL. Embedded nano-iron polysulfone membrane for dehydration of the ethanol/water mixtures by pervaporation. *Desalination*, 234 (2008) 221–231.

Chen X, Jiang J, Yan F, Tian S, Li K. A novel low temperature vapor phase hydrolysis method for the production of nano-structured silica materials using silicon tetrachloride. *RSC Advances*, 4 (2014) 8703–8710.

Chen X, Mao SS. Titanium dioxide nanomaterials: Synthesis, properties, modifications, and applications. *Chemical Reviews*, 107(2007) 2891-2959.

Cho M, Chung H, Choi W, Yoon J. Linear correlation between inactivation of *E. coli* and OH radical concentration in TiO_2 photocatalytic disinfection. *Water Research*, 38 (2004) 1069–1077.

Cho WH, Kang DJ, Kim SG. Intraparticle structure of composite TiO₂/SiO₂ nanoparticles prepared by varying precursor mixing modes in vapor phase. *Journal of materials science*, 38(2003) 2619-2625.

Chokkareddy R, Redhi GG. Green Synthesis of Metal Nanoparticles and Its Reaction Mechanisms. *Green Metal Nanoparticles*, (2018) 113–139. <https://doi.org/10.1002/9781119418900.ch4>.

Chovau S, Dobrak A, Figoli A, Galiano F, Simone S, Drioli E, Sikdar SK, Van der Bruggen B. Pervaporation performance of unfilled and filled PDMS membranes and novel SBS membranes for the removal of toluene from diluted aqueous solutions. *Chemical Engineering Journal*, 159(2010) 37–46.

Chung TS, Jiang LY, Li Y, Kulprathipanja S. Mixed matrix membranes (MMMs) comprising organic polymers with dispersed inorganic fillers for gas separation. *Progress in Polymer Science*, 32(2007) 483–507.

Colvin VL, Schlamp MC, Alivisatos AP. Light-Emitting Diodes Made from Cadmium Selenide Nanocrystals and a Semiconducting Polymer. *Nature*, 370 (1994) 354–357.

Cordoba MCF, Matos J, Montaña R, Poon PS, Lanfredi S, Praxedes FR, Hernández-Garrido JC, Calvino JJ, Rodríguez-Aguado E, Rodríguez-Castellón E, Ania CO. Sunlight photoactivity of rice husks-derived biogenic silica. *Catalysis Today*, 328(2019) 125-135.

Daniel MC, Astruc D. Gold Nanoparticles: Assembly, Supramolecular Chemistry, Quantum-Size-Related Properties, and Applications Toward Biology, Catalysis, and Nanotechnology. *Chemical Reviews*, 104 (2004) 293–346.

- Devatha CP, Thalla AK, Katte SY. Green synthesis of iron nanoparticles using different leaf extracts for treatment of domestic waste water. *Journal of Cleaner Production*, 139(2016)1425–1435.
- Dhir B. Potential of biological materials for removing heavy metals from wastewater. *Environmental Science and Pollution Research*, 21(2014) 1614-1627.
- Ding TP, Ma GR, Shui MX, Wan DF, Li RH. Silicon isotope study on rice plants from the Zhejiang Province, China. *Chemical Geology*, 218 (2005) 41–50.
- Dobrucka R. Synthesis of Titanium Dioxide Nanoparticles Using Echinacea Purpurea Herba. *Iranian Journal of Pharmaceutical Research*, 16 (2017) 753–759.
- Dong G, Nagasawa H, Yu L, Guo M, Kanezashi M, Yoshioka T, Tsuru T. Energy efficient separation of organic liquids using organosilica membranes via a reverse osmosis route. *Journal of Membrane Science*, 597 (2020) 117758. <https://doi.org/10.1016/j.memsci.2019.117758>.
- Dong L, Zhu Z, Qiu Y, Zhao J. Removal of lead from aqueous solution by hydroxyapatite/ magnetite composite adsorbent. *Chemical Engineering Journal*, 165(2010) 827-834.
- Duran N. Use of Nanoparticles in Soil-Water Bioremediation Processes. *Journal of Soil Science and Plant Nutrition*, 8 (2008) 1–6.
- Enrique CP, Jenifer CS, Anaelise MC, Ahmad HB, Guilherme L D. Microwave synthesis of silica nanoparticles and its application for methylene blue adsorption. *Journal of Environmental Chemical Engineering*, 6(2018) 649–659.

Erdural B, Bolukbasi U, Karakas G. Photocatalytic antibacterial activity of TiO₂-SiO₂ thin films: the effect of composition on cell adhesion and antibacterial activity. *Journal of Photochemistry and Photobiology A: Chemistry*, 283 (2014) 29–37.

Fateh R, Dillert R, Bahnemann D. Preparation and Characterization of Transparent Hydrophilic Photocatalytic TiO₂/SiO₂ Thin Films on Polycarbonate. *Langmuir* 29 (2013) 3730–3739.

Figgemeier E, Kylberg W, Constable E, Scarisoreanu M, Alexandrescu R, Morjan I, Soare I, Birjega R, Popovici E, Fleaca C. Titanium Dioxide Nanoparticles Prepared by Laser Pyrolysis: Synthesis and Photocatalytic Properties. *Applied Surface Science*, 254 (2007) 1037–1041.

Forgacs E, Cserhati T, Oros G. Removal of synthetic dyes from wastewaters: a review. *Environment international*, 30 (2004) 953–971.

Gandhi PR, Jayaseelan C, Kamaraj C, Rajasree SRR, Regina Mary R. In Vitro Antimalarial Activity of Synthesized TiO₂ Nanoparticles Using Momordica Charantia Leaf Extract against Plasmodium Falciparum. *Journal of Applied Biomedicine*, 16 (2018) 378–386.

Ganesan S, Babu IG, Mahendran D, Arulselvi PI, Elangovan N, Geetha N, Venkatachalam P. Green Engineering of Titanium Dioxide Nanoparticles Using Ageratina Altissima (L.) King & H.E. Robines. Medicinal Plant Aqueous Leaf Extracts for Enhanced Photocatalytic Activity. *Annals of Phytomedicine: An International Journal*, 5 (2016) 69–75.

Ghaly MY, Jamil TS, El-Seesy IE, Souaya ER, Nasr RA. Treatment of highly polluted paper mill wastewater by solar photocatalytic oxidation with synthesized nano TiO₂. *Chemical Engineering Journal*, 168(2011) 446–454.

Giesche H. Synthesis of monodispersed silica powders II. Controlled growth reaction and continuous production process. *Journal of the European Ceramic Society*, 14 (1994)205-214.

Goel J, Kadirvelu K, Rajagopal C, Kumar GV, Removal of lead (II) by adsorption using treated granular activated carbon: batch and column studies. *Journal of Hazardous Materials*, 125(2005) 211-220.

Gomes D, Nunes SP, Peinemann KV. Membranes for gas separation based on poly (1-trimethylsilyl-1-propyne)–silica nanocomposites. *Journal of Membrane Science*, 246(2005)13-25.

Gongping L, Dan H, Wang W, Fenjuan X, Wanqin J. Pervaporation separation of butanol-water mixtures using polydimethylsiloxane/ceramic composite membrane. *Chinese Journal of Chemical Engineering*, 19(2011)40-44.

Goudarzi V, Shahabi-Ghahfarrokhi I, Babaei-Ghazvini A. Preparation of Ecofriendly UV-Protective Food Packaging Material by Starch/TiO₂ Bio-Nanocomposite: Characterization. *International Journal of Biological Macromolecules*, 95 (2017) 306–313.

Goutam SP, Saxena G, Singh V, Yadav AK, Bharagava RN, Thapa KB. Green Synthesis of TiO₂ Nanoparticles Using Leaf Extract of *Jatropha Curcas* L. for Photocatalytic Degradation of Tannery Wastewater. *Chemical Engineering Journal*, 336 (2018) 386–396.

Guo RL, Ma XC, Hu CL, Jiang ZY. Novel PVA silica nano composite membrane for pervaporative dehydration of ethylene glycol aqueous solution. *Polymer*, 48 (2007) 2939–2945.

Gupta SM, Tripathi M. A Review on the Synthesis of TiO₂ Nanoparticles by Solution Route. *Central European Journal of Chemistry*, 10 (2012) 279–294.

Guzman J, Dille J, Godet S. Synthesis of silver nanoparticles by chemical reduction method and their antibacterial activity. *International Journal of Chemical and Biochemical Engineering*, 3 (2009) 104-111.

Halim ASH, Shehata AMA, Shahat EMF. Removal of lead ions from industrial waste water by different types of natural materials. *Water Research*, 37(2003) 1678–1683.

Han Z, Chang VWC, Zhang L, Tse MS, Tan OK, Hildemann LM. Preparation of TiO₂-coated polyester fiber filter by spray-coating and its photocatalytic degradation of gaseous formaldehyde. *Aerosol and Air Quality Research*, 12 (2012) 1327–1335.

Hashimoto K, Irie H, Fujishima A. TiO₂ Photocatalysis: A Historical Overview and Future Prospects. *Japan Society of Applied Physics*, 44 (2005) 8269–8285.

Hernandez C, Pierre AC. Influence of the Sol–Gel Acidic Synthesis Conditions on the Porous Texture and Acidity of SiO₂–Al₂O₃ Catalysts with a Low Al Proportion. *Langmuir* 16(2000) 530-536.

Hoffman AJ, Mills G, Yee H, Hoffmann MR. Q-Sized CdS: Synthesis, Characterization, and Efficiency of Photoinitiation of Polymerization of Several Vinylic Monomers. *Journal of Physical Chemistry*, 96 (1992) 5546–5552.

Hoffmann MR, Martin ST, Choi W, Bahnemann DW. Environmental Applications of Semiconductor Photocatalysis. *Journal of Chemical Reviews*, 95 (1995) 69–96.

Hong H, Chen L, Zhang Q, Zhang Z. Acetic acid/water separation by pervaporation with silica filled PDMS membrane. *Polymer Engineering and Science*, 51(2011)819-825.

Hu J, Zhao D, Wang X. Removal of Pb(II) and Cu(II) from aqueous solution using multiwalled carbon nanotubes/iron oxide magnetic composites. *Water Science and Technology*, 63(2011) 917-923.

Hu M, Furukawa S, Ohtani R, Sukegawa H, Nemoto Y, Reboul J, Kitagawa S, Yamauchi Y. Synthesis of Prussian Blue Nanoparticles with a Hollow Interior by Controlled Chemical Etching. *Angewandte Chemie International Edition*, 51 (2012) 984–988.

Hu P, Long M. Cobalt-catalyzed sulfate radical-based advanced oxidation: A review on heterogeneous catalysts and applications. *Applied Catalysis B: Environmental*, 181(2016)103–117.

Huang X, EI-Sayed IH, Qian W, EI-Sayed MA. Cancer Cell Imaging and Photothermal Therapy in the Near-Infrared Region by Using Gold Nanorods. *Journal of American Chemical Society*, 128(2006) 2115-2120

Huang YW, Zhang P, Fu JW, Zhou YB, Huang XB, Tang XZ. Pervaporation of ethanol aqueous solution by polydimethylsiloxane/ polyphosphazene nanotube nanocomposite membranes. *Journal of Membrane Science*, 339 (2009) 85–92.

- Hunagund SM, Desai VR, Kadadevarmath JS, Barretto DA, Vootla S, Sidarai AH. Biogenic and Chemogenic Synthesis of TiO₂ NPs: Via Hydrothermal Route and Their Antibacterial Activities. *RSC Advances*, 6 (2016) 97438–97444.
- Hwang CL, Wu DS. Properties of cement paste containing rice husk ash. *American Concrete Institute*, 114 (1989)733–765.
- Indris S, Amade R, Heitjans P, Finger M, Haeger A, Hesse D, Grünert W, Börger A, Becker KD. Preparation by High-Energy Milling, Characterization, and Catalytic Properties of Nanocrystalline TiO₂. *Journal of Physical Chemistry B*, 109 (2005), 23274–23278.
- Iqbal P, Preece JA, Mendes PM. Nanotechnology: The “Top-Down” and “Bottom-Up” Approaches. *Supramolecular Chemistry*, (2012). <https://doi.org/10.1002/9780470661345.smc195>.
- Iravani S. Green Synthesis of Metal Nanoparticles Using Plants. *Green Chemistry*, 13 (2011) 2638–2650.
- Jamuna KS, Banu S, Brindha P, Kurian GA. Nano-Scale Preparation of Titanium Dioxide by Desmodium Gangeticum Root Aqueous Extract. *Ceramics International*, 40 (2014) 11933–11940.
- Jang HT, Park Y, Ko YS, Lee JY, Margandan B. Highly siliceous MCM-48 from rice husk ash for CO₂ adsorption. *International Journal of Greenhouse Gas Control*, 3(2009) 545–549.
- Jwo CS, Tien DC, Teng TP, Chang H, Tsung TT, Liao CY, Lin CH. Preparation and UV Characterization of TiO₂ Nanoparticles Synthesized by Sanss. *Reviews on Advanced Materials Science*, 10(2005)283-288.
-

Kandregula G, Rao KV, Chidurala S. Synthesis of TiO₂ nanoparticles from orange fruit waste. *International Journal of Multidisciplinary Advanced Research Trends*, 2(2015) 82-90.

Kandula S, Jeevanandam P. Synthesis of Silica@ Ni-Co mixed metal oxide core-shell nanorattles and their potential use as effective adsorbents for waste water treatment. *European Journal of Inorganic Chemistry*, (2015) 4260 -4274.

Kashale, A. A.; Gattu, K. P.; Ghule, K.; Ingole, V. H.; Dhanayat, S.; Sharma, R.; Chang, J. Y.; Ghule, A. V. Biomediated Green Synthesis of TiO₂ Nanoparticles for Lithium Ion Battery Application. *Composites Part B: Engineering*, 99(2016)297–304.

Khadar A, Behara D, Kumar M. Synthesis and Characterization of Controlled Size TiO₂ Nanoparticles via Green Route Using Aloe Vera Extract. *International Journal of Science and Research*, 5 (2016) 1913–1916.

Kim CS, Moon BK, Park JH, Chung ST, Son SM. Synthesis of nanocrystalline TiO₂ in toluene by a solvothermal route. *Journal of Crystal Growth*, 254 (2003) 405–410.

Kim CS, Nakaso K, Xia B, Okuyama K, Shimada M. A new observation on the phase transformation of TiO₂ nanoparticles produced by a CVD method. *Aerosol and Technology*, 39(2005) 104–112.

Kim EY, Kim DS, Ahn BT. Synthesis of mesoporous TiO₂ and Its application to photocatalytic activation of Methylene Blue and *E. coli*. *Bulletin of the Korean Chemical Society*, 30(2009) 193–196.

Kim JS, Kuk E, Yu KN, Kim JH, Park SJ, Lee HJ, Kim SH, Park YK, Park YH, Hwang CY. Antimicrobial Effects of Silver Nanoparticles. *Nanomedicine: Nanotechnology, Biology, and Medicine*, 3(2007) 95-101.

Kim KD, Kim HT. Formation of Silica Nanoparticles by Hydrolysis of TEOS Using a Mixed Semi-Batch/Batch Method. *Journal of Sol-Gel Science and Technology*, 25(2002) 183–189.

Kittur AA, Kariduraganavar MY, Toti US, Ramesh K, Aminabhavi TM. Pervaporation separation of water–isopropanol mixtures using ZSM-5 zeolite filled poly (vinyl alcohol) membranes. *Journal of Applied Polymer Science*, 90 (2003) 2441–2448.

Komes D, Belščak-Cvitanović A, Horžić D, Rusak G, Likić S, Berendika M. Phenolic Composition and Antioxidant Properties of Some Traditionally Used Medicinal Plants Affected by the Extraction Time and Hydrolysis. *Phytochemical analysis*, 22 (2011) 172–180.

Krishnarao RV, Subrahmanyam J, Jagadish KT. Studies on the formation of black particles in rice husk silica ash. *Journal of European Ceramic Society*, 21(2001) 99–104.

Kumar MK, Mandal KB, Kumar SK, Reddy SP, Sreedhar B. Biobased green method to synthesize palladium and iron nanoparticles using *Terminalia chebula* aqueous extract. *Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy*, 102(2013)128-133.

Kumar V, Tiwari P, Krishnia L, Kumari R, Singh A, Ghosh A, Tyagi PK. Green route synthesis of silicon/silicon oxide from bamboo. *Advanced Materials Letters*,

7(2016) 271-276.

Kurkuri MD, Aminabhavi TM. Polyacrylonitrile-g-poly (vinyl alcohol) membranes for the pervaporation separation of dimethyl formamide and water mixtures. *Journal of Applied Polymer Science*, 91 (2004) 4091–4097.

Kuwahara Y, Yamashita H. Efficient photocatalytic degradation of organics diluted in water and air using TiO₂ designed with zeolites and mesoporous silica materials. *Journal of Materials Chemistry*, 21 (2011) 2407–2416.

Kvs A, Bottu MMV, Sarvamangala D. Production of TiO₂ Nanoparticles by Green and Chemical Synthesis-A Short Review. *International Journal of Scientific & Engineering Research*, 9(2018) 1633-1648.

Lakshmi UR, Vimal CS, Indra DM, Lataye DH. Rice husk ash as an effective adsorbent: Evaluation of adsorptive characteristics for Indigo Carmine dye. *Journal of Environmental Management*, 90(2009)710–720.

Laurent S, Forge D, Port M, Roch A, Robic C, Vander Elst L, Muller RN. Erratum: Magnetic Iron Oxide Nanoparticles: Synthesis, Stabilization, Vectorization, Physicochemical Characterizations, and Biological Applications . *Chemical Reviews*, 108 (2008) 2064-2110.

Le NL, Wang Y, Chung TS. Pebax/POSS mixed matrix membranes for ethanol recovery from aqueous solutions via pervaporation. *Journal of Membrane science*, 379(2011)174-183.

Lee SJ, Son HS, Lee HK, Zoh KD. Photocatalytic degradation of explosives contaminated water. *Water Science and Technology*, 46 (2002) 139–145.

- Lee SW, Drwiega J, Wu CY, Mazyck D, Sigmund WM. Anatase TiO₂ nanoparticle coating on barium ferrite using titanium bis ammonium lactate dihydroxide and its use as a magnetic photo catalyst. *Chemistry of Materials*, 16 (2004) 1160-1164.
- Li A, Jin Y, Muggli D, Pierce DT, Aranwela H, Marasinghe GK, Knutson T, Brockman G, Zhao JX. Nanoscale effects of silica particle supports on the formation and properties of TiO₂ nanocatalysts. *Nanoscale* 5 (2013) 5854–5862.
- Li B, Xu D, Jiang ZY, Zhang XF, Liu WP, Dong X. Pervaporation performance of PDMS-Ni²⁺Y zeolite hybrid membranes in the desulfurization of gasoline. *Journal of Membrane Science*, 322 (2008) 293–301.
- Li G, Bai R, Zhao XS. Coating of TiO₂ Thin Films on the Surface of SiO₂ Microspheres: Toward Industrial Photo catalysis. *Industrial & Engineering Chemistry Research*, 47 (2008) 8228–8232.
- Li G, Zhao XS. Characterization and photocatalytic properties of titanium-containing mesoporous SBA-15. *Industrial & engineering chemistry research*, 45(2006)3569-3573.
- Li G. “Performance improvement of TiO₂ catalysts supported on adsorbents”. Ph.D thesis, National University of Singapore, Singapore, 2007.
- Li X, He J. Synthesis of Raspberry-Like SiO₂-TiO₂ Nanoparticles toward Antireflective and Self-Cleaning Coatings. *ACS Applied Materials & Interfaces*, 5 (2013) 5282–5290.
- Lijuan J, Yajun W, Changgen F. Application of photocatalytic technology in environmental safety. *Procedia Engineering*, 45(2012)993-997.

- Lin KM. "The study on the manufacture of particle-board made of China fir flakes and hulls". Master thesis, National Chung-Hsing University, 1975.
- Liou TH, Yang CC. Synthesis and surface characteristics of nanosilica produced from alkali-extracted rice husk ash. *Materials Science and Engineering B*, 176(2011)521–529.
- Liu C, Yang D, Jiao Y, Tian Y, Wang Y, Jiang Z. Biomimetic Synthesis of TiO₂–SiO₂–Ag Nanocomposites with Enhanced Visible-Light Photocatalytic Activity. *ACS Applied Materials & Interfaces*, 5(2013) 3824–3832.
- Liu Q, Wu X, Zhang K. Polysulfone/Polyamide-SiO₂ Composite Membrane with High Permeance for Organic Solvent Nanofiltration. *Membranes*, 8(2018) 89-101.
- Liu XH, Sun Y, Deng XH. Studies on the pervaporation membrane of permeation water from methanol/water mixture. *Journal of Membrane Science*, 325 (2008) 192–198.
- Liu YL, Hsu CY, Hsu KY. Poly (methylmethacrylate)-silica nanocomposites films from surface-functionalized silica nanoparticles. *Polymer*, 46(2005)1851–1856.
- Livage J, Henry M, Sanchez C. Sol-Gel Chemistry of Transition Metal Oxides. *Progress in Solid State Chemistry*, 18 (1998) 259–341.
- Lo´pez R and Go´mez R. Band-gap energy estimation from diffuse reflectance measurements on sol-gel and commercial TiO₂: a comparative study. *Journal of Sol-Gel Science and Technology*, 61 (2012) 1–7.
- Mackenzie JD, Bescher EP. Chemical Routes in the Synthesis of Nanomaterials Using the Sol-Gel Process. *Accounts of Chemical Research*, 40 (2007) 810–818.
-

Madadi Z, Lotfabad TB. Aqueous Extract of *Acanthophyllum Laxiusculum* Roots as a Renewable Resource for Green Synthesis of Nano-Sized Titanium Dioxide Using the Sol-Gel Method. *Advanced Ceramics Progress*, 2(2016) 26-31.

Mahesh KPO, Kuo DH, Huang BR, Ujihara M, Imae T. Chemically modified polyurethane- $\text{SiO}_2+\text{TiO}_2$ hybrid composite film and its reusability for photocatalytic degradation of Acid Black 1 (AB1) under UV light. *Applied Catalysis A; General*, 475 (2014) 235-241.

Marimuthu S, Rahuman AA, Jayaseelan C, Kirthi AV, Santhoshkumar T, Velayutham K, Bagavan A, Kamaraj C, Elango G, Iyappan M. Acaricidal Activity of Synthesized Titanium Dioxide Nanoparticles Using *Calotropis Gigantea* against *Rhipicephalus Microplus* and *Haemaphysalis Bispinosa*. *Asian Pacific Journal of Tropical Medicine*, 6 (2013) 682–688.

Martra G, Augugliaro V, Coluccia S., Photocatalytic oxidation of gaseous toluene on polycrystalline TiO_2 : FTIR investigation of surface reactivity of different types of catalysts. *Studies in Surface Science and Catalysis*, 130(2000) 665-670.

Matsuzawa S, Maneerat C, Hayata Y, Hirakawa T, Negishi N, Sano T. Immobilization of TiO_2 nanoparticles on polymeric substrates by using electrostatic interaction in the aqueous phase. *Applied Catalysis B: Environmental*, 83 (2008) 39–45.

Meng X, Luo N, Cao S, Zhang S, Yang M, Hu X. In-situ growth of titania nanoparticles in electrospun polymer nanofibers at low temperature. *Materials Letters*, 63 (2009)1401–1403.

Miao L, Su LF, Tanemura S, Fisher CAJ, Zhao LL, Liang Q, Xu G. Cost-effective nanoporous SiO₂-TiO₂ coatings on glass substrates with anti-reflective and self-cleaning properties, *Applied Energy*, 112 (2013) 1198–1205.

Mobeen Amanulla A, Sundaram R. Green Synthesis of TiO₂ Nanoparticles Using Orange Peel Extract for Antibacterial, Cytotoxicity and Humidity Sensor Applications. *Materials Today: Proceedings*, 8(2019) 323–331.

Mohammadi T, Kikhavandi T, Moghbeli M. Synthesis and Characterization of Poly (ether-block-amide) Membranes for the Pervaporation of Organic/Aqueous Mixtures. *Journal of Applied Polymer Science*, 107(2008)1917–1923.

Moncada E, Quijada R, Retuert J. Nanoparticles prepared by the sol-gel method and their use in the formation of nanocomposites with polypropylene. *Nanotechnology*, 18(2007) 335606. <https://doi.org/10.1088/0957-4484/18/33/335606>.

Mondal MK. Removal of Pb (II) ions from aqueous solution using activated tea waste: Adsorption on a fixed-bed column. *Journal of Environmental Management*, 90(2009) 3266-3271.

Moore MN. Do Nanoparticles Present Ecotoxicological Risks for the Health of the Aquatic Environment? *Environment international*, 32 (2006) 967–976.

Mueller R, Mädler L, Pratsinis SE. Nanoparticle Synthesis at High Production Rates by Flame Spray Pyrolysis. *Chemical Engineering Science*, 58 (2003) 1969–1976.

Muniandy SS, Mohd Kaus NH, Jiang ZT, Altarawneh M, Lee HL. Green Synthesis of Mesoporous Anatase TiO₂ Nanoparticles and Their Photocatalytic Activities. *RSC Advances*, 7 (2017) 48083–48094.

- Muniandy SS, Kaus NHM, Jiang ZT, Altarawneh M, Lee HL. Green synthesis of mesoporous anatase TiO₂ nanoparticles and their photocatalytic activities. *RSC Advances*, 7(2017) 48083-48094.
- Murrini L, Leyva G, Litter MI. Photocatalytic removal of Pb(II) over TiO₂ and Pt–TiO₂ powders. *Catalysis Today* 129 (2007) 127–135.
- Nadtochenko VA, Rincon AG, Kiwi J. Dynamics of *E. coli* membrane cell peroxidation during TiO₂ photocatalysis studied by ATR-FTIR spectroscopy and AFM microscopy. *Journal of Photochemistry and Photobiology A: Chemistry*, 169 (2005) 131–137.
- Nakashima H. Time course of effects of tetraethoxysilane (TEOS) on the kidney and blood silicon concentration in mice. *Archives of toxicology*, 69(1994)59–64.
- Nakata K, Fujishimaa A. TiO₂ photocatalysis: Design and applications. *Journal of Photochemistry and Photobiology C: Photochemistry Reviews*, 13(2012) 169-89.
- Nalwa, HS. Handbook of nanostructured materials and nanotechnology. Ibaraki, Japan, 2000.
- Nasrollahzadeh M, Sajadi SM. Synthesis and characterization of titanium dioxide nanoparticles using *Euphorbia heteradena* Jaub root extract and evaluation of their stability. *Ceramics International*, 41(2015) 14435-14439.
- Neppolian B, Choi HC, Sakthivel S, Arabindoo B, Murugesan V. Solar/UV-induced photocatalytic degradation of three commercial textile dyes. *Journal of Hazardous Materials*, 89(2002) 303–320.

- Nian JN, Teng H. Hydrothermal synthesis of single-crystalline anatase TiO₂ nanorods with nanotubes as the precursor. *The Journal of Physical Chemistry B*, 110 (2006) 4193–4198.
- Nik NANW, Alinda S, Mohd NL, Wan MZWY. Synthesis of Silica from Rice Husk Using Acid Pretreatment and Its Characterization. *AIP Conference Proceedings*, (2019) 2068. <https://doi.org/10.1063/1.5089367>.
- Niki B, Florence B, Bejoy T, Thibaud C. Introducing ecodesign in silica sol–gel materials. *Journal of Materials Chemistry*, 19(2009) 8537–8559.
- Nittaya T, Apinon N. Preparation of Nanosilica Powder from Rice Husk Ash by Precipitation Method. *Chiang Mai Journal of Science*, 35(2008)206–211.
- O’Neal DP, Hirsch LR, Halas NJ, Payne JD, West JL. Photo-Thermal Tumor Ablation in Mice Using near Infrared-Absorbing Nanoparticles. *Cancer Letters*, 209 (2004) 171–176.
- Ollis DF, Al-Ekabi H. *Photocatalytic Purification and Treatment of Water and Air*. Elsevier Science, Amsterdam, 1993.
- Oskam G. Metal Oxide Nanoparticles: Synthesis, Characterization and Application. *Journal of Sol-Gel Science and Technology*, 37 (2006) 161–164.
- Pakdel E, Daoud WA, Seyedin S, Wang J, Rajal JM, Sun L, Wang X. Tunable photocatalytic selectivity of TiO₂/SiO₂ nanocomposites; Effect of silica and isolation approach. *Colloids and Surfaces A*, 552 (2018) 130-141.
- Pal SL, Jana U, Manna PK, Mohanta GP, Manavalan R. Nanoparticle: An Overview of Preparation and Characterization. *Journal of Applied Pharmaceutical Science*, 1

(2011) 228–234.

Panek D, Konieczny K. Preparation and applying the membranes with carbon black to pervaporation of toluene from the diluted aqueous solutions. *Separation and Purification Technology*, 57 (2007) 507–512.

Patidar V, Jain P. Green synthesis of TiO₂ nanoparticle using *Moringaoleifera* leaf extract. *International Journal of Research in Engineering and Technology*, 4(2017) 470–473.

Paul DR, Mark JE. Fillers for polysiloxane (“silicone”) elastomers. *Progress in Polymer Science*, 35(2010) 893–901.

Peiro MA, Peral J, Domingo C, Momenech X, Ayllon AJ. Low-temperature deposition of TiO₂ thin films with photocatalytic activity from colloidal anatase aqueous solutions. *Chemistry of Materials*, 13(2011) 2567-2573.

Peng FB, Jiang ZY, Hu CL, Wang YQ, Xu HQ, Liu JQ. Removing benzene from aqueous solution using CMS-filled PDMS pervaporation membranes. *Separation and Purification Technology*, 48 (2006) 229–234.

Peng P, Shi B, Lan Y. Preparation of PDMS—Silica Nanocomposite Membranes with Silane Coupling for Recovering Ethanol by Pervaporation. *Separation Science and Technology*, 46(2011) 420–427.

Pissuwan D, Niidome T, Cortie MB. The Forthcoming Applications of Gold Nanoparticles in Drug and Gene Delivery Systems. *Journal of Controlled Release*, 149 (2011) 65–71.

Qian X, Fuku K, Kuwahara Y, Kamegawa T, Mori K, Yamashita H. Design and functionalization of photocatalytic systems within mesoporous silica. *ChemSusChem*, 7 (2014) 1528–1536.

Quideau S, Deffieux D, Douat-Casassus C, Pouységu L. Plant Polyphenols: Chemical Properties, Biological Activities, and Synthesis. *Angewandte Chemie International Edition*, 50 (2011) 586–621.

Rajakumar G, Rahuman AA, Priyamvada B, Khanna VG, Kumar DK, Sujin PJ. Eclipta Prostrata Leaf Aqueous Extract Mediated Synthesis of Titanium Dioxide Nanoparticles. *Materials Letters*, 68(2012)115–117.

Rajakumar G, Rahuman AA, Jayaseelan C, Santhoshkumar T, Marimuthu S, Kamaraj C, Bagavan A, Zahir AA, Kirthi AV, Elango G. Solanum Trilobatum Extract-Mediated Synthesis of Titanium Dioxide Nanoparticles to Control Pediculus Humanus Capitis, Hyalomma Anatolicum Anatolicum and Anopheles Subpictus. *Parasitology Research*, 113 (2014) 469–479.

Rangaraj S, Venkatachalam R. A lucrative chemical processing of bamboo leaf biomass to synthesize biocompatible amorphous silica nanoparticles of biomedical importance. *Applied Nanoscience*, 7(2017) 145–153.

Rao KG, Ashok CH, Rao KV, Chakra S, Tambur P. Green synthesis of TiO₂ nanoparticles using aloe vera extract. *International Journal of Advanced Research in Physical Science*, 2(2015) 28-34.

Rauf MA, Ashraf SS. Fundamental principles and application of heterogeneous photocatalytic degradation of dyes in solution. *Chemical Engineering Journal*, 151 (2009) 10–18.

Real C, Alcalá D, María C, José M. Preparation of Silica from Rice Husks. *Journal of American Ceramic Society*, 79 (2008) 2012-2016.

Rehman RO, Ibrahim HA, Hung YT. Liquid Radioactive Wastes Treatment: A Review. *Water*, 3 (2011) 551–565.

Ren K, Kagi DA. Study of water repellent effect of earth substrates impregnated with water-based silicones. *Journal of Chemical Technology and Biotechnology*, 63(1995) 237–246.

Rice-evans CA, Miller NJ, Bolwell PG, Bramley PM, Pridham JB. The Relative Antioxidant Activities of Plant-Derived Polyphenolic Flavonoids. *Free Radical Research*, 22 (1995) 375–383.

Robinson T, McMullan G, Marchant R, Nigam P. *Bioresource Technology*, 77(2001) 247–255.

Roopan SM, Bharathi A, Prabhakarn A, Abdul Rahuman A, Velayutham K, Rajakumar G, Padmaja RD, Lekshmi M, Madhumitha G. Efficient Phyto-Synthesis and Structural Characterization of Rutile TiO₂ Nanoparticles Using *Annona Squamosa* Peel Extract. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 98(2012) 86–90.

Rosi H, Kalyanasundaram S. Synthesis, characterization, structural and optical properties of titanium-dioxide nanoparticles using *Glycosmiscochinensis* Leaf extract and its photocatalytic evaluation and antimicrobial properties. *WNOFNS*, 17(2018)1-15.

Roualdes S, Durand J, Field RW. Comparative performance of various plasma polysiloxane films for the pervaporative recovery of organics from aqueous streams. *Journal of Membrane Science*, 211 (2003) 113–126.

Sahaya P, Kumar M, Francis AP, Devasena T. Biosynthesized and Chemically Synthesized Titania Nanoparticles: Comparative Analysis of Antibacterial Activity. *Journal of Environmental Nanotechnology*, 3 (2014) 73–81.

Sana NO, Kursungöz C, Tümtas Y, Yasa Ö, Ortac B, Tekinay T. Novel one-step synthesis of silica nanoparticles from sugar beet bagasse by laser ablation and their effects on the growth of freshwater algae culture. *Particuology*, 17 (2014) 29–35.

Sandeep B, Mohd AG, Biswajit M, Avijit B, Sudhakar C, Jyoti SM, Thalappil P. Synthesis of Silicon Nanoparticles from Rice Husk and their Use as Sustainable Fluorophores for White Light Emission. *ACS Sustainable Chemistry & Engineering*, 6(2018) 6203–6210.

Sankar S, Sharma SK, Kaur N, Lee B, Kim DY, Lee S, Jung H. Biogenerated silica nanoparticles synthesized from sticky, red, and brown rice husk ashes by a chemical method. *Ceramics International*, 42 (2016) 4875–4885.

Santhoshkumar T, Rahuman AA, Jayaseelan C, Rajakumar G, Marimuthu S, Kirthi AV, Velayutham K, Thomas J, Venkatesan J, Kim S. K. Green Synthesis of Titanium Dioxide Nanoparticles Using Psidium Guajava Extract and Its Antibacterial and Antioxidant Properties. *Asian Pacific Journal of Tropical Medicine*, 7 (2014) 968–976.

Santhoshkumar T, Rahuman AA, Jayaseelan C, Rajakumar G, Marimuthu S, Kirthi AV, Kim SK. Green synthesis of titanium dioxide nanoparticles using

Psidiumguajava extract and its antibacterial and antioxidant properties. *Asian Pacific Journal of Tropical Medicine*, 7(2014) 968–976.

Saranya KS, Padil VVT, Senan C, Pilankatta R, Saranya K, George B, Waclawek S, Cerník M. Green Synthesis of High Temperature Stable Anatase Titanium Dioxide Nanoparticles Using Gum Kondagogu: Characterization and Solar Driven Photocatalytic Degradation of Organic Dye. *Nanomaterials*, 8 (2018) 1002-1021.

Saravanan P, Ganapathy M, Charles A, Tamilselvan S, Jeyasekaran R. Electrical Properties of Green Synthesized TiO₂ Nanoparticles., *Advances in Applied Science Research*, 7 (2016) 158–168.

Sastry M, Ahmad A, Islam Khan M, Kumar R. Biosynthesis of Metal Nanoparticles Using Fungi and Actinomycete. *Current science*, 85 (2003) 162–170.

Saxena G, Chandra R, Bharagava RN. Environmental pollution, toxicity profile and treatment approaches for tannery wastewater and its chemical pollutants. *Reviews of Environmental Contamination and Toxicology*, 240(2016) 31–69.

Schmid G. Large Metal Clusters and Colloids - Metals in the Embryonic State. *Progress in Colloid and Polymer Science*, 111(1998) 52–57.

Shalini S, Prabavathy N, Balasundaraprabhu R, Kumar TS, Velauthapillai D, Balraju P, Prasanna S. Studies on DSSC Encompassing Flower Shaped Assembly of Na-Doped TiO₂ Nanorods Sensitized with Extract from Petals of *Kigelia Africana*. *Optik*, 155(2018) 334–343.

Shelke VR, Bhagade SS, Mandavgene SA. Mesoporous silica from rice husk ash. *Bulletin of Chemical Reaction Engineering & Catalysis*, 5(2010) 63–67.

Shin D , Banerjee D. Enhanced thermal properties of SiO₂ nanocomposite for solar thermal energy storage applications. *International Journal of Heat and Mass Transfer*. 84(2015) 898-902.

Shin Y, Lee D, Lee K, Ahn KH, Kim B. Surface properties of silica nanoparticles modified with polymers for polymer nanocomposite applications. *Journal of Industrial and Engineering Chemistry*, 14(2008) 515–519.

Sin JC, Lam SM, Mohamed AR, Lee KT. Degrading endocrine disrupting chemicals from wastewater by TiO₂ photo catalysis: A review. *International Journal of Photoenergy*, 2012 (2012) 185159-185182.

Singh B, Das SK. Removal of Pb (II) ions from aqueous solution and industrial effluent using natural biosorbents. *Environmental Science and Pollution Research*, 19(2012) 2212-2226.

Singh J, Dutta T, Kim KH, Rawat M, Samddar P, Kumar P. “Green” Synthesis of Metals and Their Oxide Nanoparticles: Applications for Environmental Remediation. *Journal of Nano biotechnology*, 16 (2018)1–24.

Singh S, Mahalingam H, Singh PK. Polymer-supported titanium dioxide photocatalysts for environmental remediation: A review. *Applied Catalysis A: General*, 462–463 (2013) 178–195.

Situ Y, Huang T, Chen Y, Huang W, Huang H. Polymerization-induced phase separation in the preparation of macroporous TiO₂/SiO₂ thin films. *Ceramics International*, 40 (2014) 919–927.

Sivaranjani V, Philominathan P. Synthesize of Titanium Dioxide Nanoparticles Using Moringa Oleifera Leaves and Evaluation of Wound Healing Activity. *Wound Medicine*, 12(2016) 1–5.

Siwach OP, Sen P. Fluorescence Properties of Fe Nanoparticles Prepared by Electro-Explosion of Wires. *Materials Science and Engineering. B, Solid-State Materials for Advanced Technology*, 149 (2008), 99–104.

Song S, Cho HB, Kim HT. Surfactant-free synthesis of high surface area silica nanoparticles derived from rice husks by employing the Taguchi approach. *Journal of Industrial and Engineering Chemistry*, 61(2018) 281–287.

Soria J, Sanz J, Sobrados I, Coronado JM, Hernandez-Alonso MD, Fresno F. FTIR and NMR Study of the Adsorbed Water on Nanocrystalline Anatase. *Journal of Physical Chemistry C*, 114 (2010) 16534–16540.

Stober W, Fink A. Controlled growth of monodisperse silica spheres in the micron size range. *Journal of colloid and interface science*, 26 (1968) 62–69.

Su XY, Liu PD, Wu H, Gu N. Enhancement of Radiosensitization by Metal-Based Nanoparticles in Cancer Radiation Therapy. *Cancer Biology & Medicine*, 11(2014) 86–91.

Subhapiya S, Gomathipriya P. Green Synthesis of Titanium Dioxide (TiO₂) Nanoparticles by Trigonella Foenum-Graecum Extract and Its Antimicrobial Properties. *Microbial Pathogenesis* 116 (2018) 215–220.

Sugimoto T, Zhou X, Muramatsu A. Synthesis of uniform anatase TiO₂ nanoparticles by gel–sol method. 1: Solution chemistry of Ti(OH)_n^{(4–n)+} complexes. *Journal of Colloid and Interface Science*, 252 (2002) 339–346.

Sun D, Li BB, Xu ZL. Pervaporation of ethanol/water mixture by organophilic nano-silica filled PDMS composite membranes. *Desalination*, 322(2013) 159–166.

Sun L, Gong K. Review: Silicon-based materials from rice husks and their applications. *Industrial & Engineering Chemistry Research*, 40 (2001) 5861–5877.

Sundrarajan M, Gowri S. Green Synthesis of Titanium Dioxide Nanoparticles by *Nyctanthes Arbor-Tristis* Leaves Extract. *Chalcogenide Letters*, 8 (2011) 447–451.

Sundrarajan M, Bama K, Bhavani M, Jegatheeswaran S, Ambika S, Sangili A, Nithya P, Sumathi R. Obtaining Titanium Dioxide Nanoparticles with Spherical Shape and Antimicrobial Properties Using *M. Citrifolia* Leaves Extract by Hydrothermal Method. *J. Photochem. Journal of Photochemistry and Photobiology B: Biology*, 171 (2017) 117–124.

Swihart MS. Vapour-phase synthesis of nanoparticles . *Current opinion in colloid and interface science*, 8(2003) 127-133.

Tan TN, Hoa TM, Pramod A, Mohammed JKB, Choon AN, Ling YW, Hieng KJ, Quang MN, Ngoc QT. Adsorptive Removal of Iron Using SiO₂ Nanoparticles Extracted from Rice Husk Ash. *Journal of Analytical Methods in Chemistry*, (2019). <https://doi.org/10.1155/2019/6210240>.

Tang X, Wang R, Xiao Z, Shi E, Yang J. Preparation and pervaporation performances of fumed-silica-filled polydimethylsiloxane–polyamide (PA) composite membranes. *Journal of Applied Polymer Science*, 105(2007) 3132–3137.

Tavares MTS, Santos ASF, Santos IMG, Silva MRS, Bomio MRD, Longo E, Paskocimas CA, Motta FV. TiO₂/PDMS nano composites for use on self-cleaning surfaces. *Surface and Coatings Technology*, 239 (2014) 16-19.

- Tellez L, Rubio J, Rubio F, Morales E, Oteo JL. FT-IR study of the hydrolysis and polymerization of tetraethyl orthosilicate and polydimethyl siloxane in the presence of tetrabutyl orthotitanate. *Spectroscopy Letters*, 37(2004) 11–31.
- Tian M, Wu G, Chen A. Unique Electrochemical Catalytic Behavior of Pt Nanoparticles Deposited on TiO₂ Nanotubes. *ACS Catalysis*, 2 (2012) 425–432.
- Tiwari J , Behari P, Sen P. Application of nanoparticles in waste water treatment. *World Applied Sciences Journal*, 3(2008) 417-433.
- Toh YHS, Silva M, Livingston A. Controlling molecular weight cut-off curves for highly solvent stable organic solvent nanofiltration (OSN) membranes. *Journal of Membrane Science*, 324(2008) 220–232.
- Toyoda M, Nanbu Y, Kito T, Hirano M, Inagaki M. Preparation and performance of anatase-loaded porous carbons for water purification. *Desalination*, 159 (2003) 273-282.
- Tunay O, Kabdasli I, Eremektar G, Orhon D. Color removal from textile wastewaters. *Water Science and Technology*, 34 (1996) 9–16.
- Ucun H, Bayhana YK, Kaya Y, Cakici A, Algur OF. Biosorption of lead (II) from aqueous solution by cone biomass of *Pinussylvestris*. *Desalination*, 154(2003) 233-241.
- Vacassy R, Flatt RJ. Synthesis of Microporous Silica Spheres. *Journal of Colloid and Interface Science*, 227 (2000)302-315.
- Vadlapudi V, Amanchy R. Phytofabrication of silver nanoparticles using *Myriostachyawightiana* as a novel bioresource, and evaluation of their biological

activities. *Brazilian Archives of Biology and Technology*, (2017) 60.<http://dx.doi.org/10.1590/1678-4324-2017160329>.

Varghese OK, Gong DW, Paulose M, Grimes CA, Dickey EC. Crystallization and high temperature structural stability of titanium oxide nanotube arrays. *Journal of Materials Research*, 18 (2003) 156-165.

Velayutham K, Rahuman AA, Rajakumar G, Santhoshkumar T, Marimuthu S, Jayaseelan C, Bagavan A, Kirthi AV, Kamaraj C, Zahir AA. Evaluation of *Catharanthus Roseus* Leaf Extract-Mediated Biosynthesis of Titanium Dioxide Nanoparticles against *Hippobosca Maculata* and *Bovicola Ovis*. *Parasitology Research*, 111 (2012) 2329–2337.

Verma S, Gokhale R, Burgess DJ. A Comparative Study of Top-down and Bottom-up Approaches for the Preparation of Micro/Nanosuspensions. *International Journal of Pharmaceutics*, 380 (2009) 216–222.

Vijayalakshmi R, Rajendran V. Synthesis and characterization of nano-TiO₂ via different methods. *Archives of Applied Science Research*, 4(2012) 1183-1190.

Vilar VJ, Botelho CM, Boaventura RA. Influence of pH, ionic strength and temperature on lead biosorption by *Gelidium* and agar extraction algal waste. *Process Biochemistry*, 40(2005) 3267-3275.

Wahyuni ET, Aprilita NH, Hatimah H, Wulandari AM, Mudasir M. Removal of toxic metal ions in water by photocatalytic method. *American Chemical Science Journal*, 5 (2005) 194-201.

Wan C, Jiao Y, Sun Q, Li J. Preparation, Characterization, and Antibacterial

Properties of Silver Nanoparticles Embedded into Cellulose Aerogels. *Polymer Composites*, 37 (2016) 1137-1142.

Wang J, Lu C, Xiong J. Self-cleaning and depollution of fiber reinforced cement materials modified by neutral TiO₂/SiO₂ hydrosol photoactive coatings. *Applied Surface Science*, 298 (2014) 19–25.

Wang T, Jin X, Chen Z, Megharaj M, Naidu R. Green synthesis of Fe nanoparticles using eucalyptus leaf extracts for treatment of eutrophic wastewater. *Science of the Total Environment*, 466–467(2014)210–213.

Wang W, Martin JC, Zhang N, Ma C, Han A, Sun L. Harvesting silica nanoparticles from rice husks. *Journal of Nanoparticle Research*, 13 (2011) 6981–6990.

Wang X, Hu D, Yang J. Synthesis of PAM/TiO₂ composite microspheres with hierarchical surface morphologies. *Chemistry of Materials*, 19(2007)2610-2621.

Wang X, Yu JC, Ho C, Hou Y, Fu X. Photocatalytic activity of a hierarchically macro/mesoporous titania. *Langmuir*, 21(2005) 2552–2559.

Wang XJ, Hu DD, Yang JX. Synthesis of PAM/TiO₂ composite microspheres with hierarchical surface morphologies. *Chemistry of Materials*, 19(2007) 2610- 2621.

Wang Y, Herron N. Nanometer-Sized Semiconductor Clusters: Materials Synthesis, Quantum Size Effects, and Photophysical Properties. *Journal of Physical Chemistry*, 95 (1991) 525–532.

Wang YD, Ma CL, Sun XD, Li HD (2003) Synthesis and characterization of amorphous TiO₂ with wormhole-like framework mesostructure. *Journal of Non-Crystalline Solids*, 319(2003)109–116.

Wilhelm P, Stephan D. Photodegradation of rhodamine B in aqueous solution via SiO₂@TiO₂ nano-spheres. *Journal of Photochemistry and Photobiology A: Chemistry*, 185 (2007) 19–25.

Wongjunda J, Saueprasearsit P. Biosorption of Chromium (VI) Using Rice Husk Ash and Modified Rice Husk Ash. *Environmental Research Journal*, 4(2010) 244–250.

Xia BB, Lenggoro W, Okuyama K. Novel Route to Nanoparticle Synthesis. *Advanced Materials*, 13 (2001) 1579–1582.

Xiangli F, Chen Y, Jin W, Xu N. Polydimethylsiloxane (PDMS)/Ceramic Composite Membrane with High Flux for Pervaporation of Ethanol-Water Mixtures. *Industrial & Engineering Chemistry Research*, 46(2007) 2224-2230.

Xingzhong G, Lingjie Z, Liqing Y, Hui Y, Lin Z. Preparation of silicon carbide using bamboo charcoal as carbon source. *Materials Letters*, 64 (2010) 331-333.

Xu C, Li WJ, Wei YM, Cui XY. Characterization of SiO₂/Ag composite particles synthesized by in situ reduction and its application in electrically conductive adhesives. *Materials & Design*, 83(2015) 745-752.

Xu C, Yang W, Guo Q, Dai D, Chen M, Yang X. Molecular Hydrogen Formation from Photocatalysis of Methanol on Anatase-TiO₂(101). *Journal of the American Chemical Society*, 136 (2014) 602–605.

Xu P, Zeng GM, Huang DL, Feng CL, Hu S, Zhao MH, Lai C, Wei Z, Huang C, Xie GX. Use of Iron Oxide Nanomaterials in Wastewater Treatment: A Review. *Science of the Total Environment*, 424(2012) 1–10.

Yang D, Li J, Jiang ZY, Lu LY, Chen X. Chitosan/TiO₂ nano composite pervaporation membranes for ethanol dehydration. *Chemical Engineering Science*, 64 (2009)3130–3137.

Yi, DK, Lee SS, Ying JY. Synthesis and application of magnetic nanocomposite catalysts. *Chemistry of materials*, 18 (2006) 2459-2461.

Yu J, Su Y, Cheng B, Zhou M. Effects of pH on the microstructures and photocatalytic activity of mesoporous nano crystalline titania powders prepared via hydrothermal method. *Journal of Molecular Catalysis A: Chemical*, 258(2006)104-112.

Yu JC, Yu JG, Ho W, Zhang LZ. Preparation of highly photocatalytic active nano-sized TiO₂ particles via ultrasonic irradiation. *Chemical Communications*, (2001)1942-1943. <https://doi.org/10.1039/B105471F>.

Yuan, R, Zheng J, Guan R, Zhao Y. Surface characteristics and photocatalytic activity of TiO₂ loaded on activated carbon fibers. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 254(2005) 131-136.

Zahir AA, Chauhan IS, Bagavan A, Kamaraj C, Elango G, Shankar J, Arjaria N, Roopan SM, Rahuman AA, Singh N. Green Synthesis of Silver and Titanium Dioxide Using *Euphorbia Prostrata* Extract Shows Shift from Apoptosis to G₀/G₁ Arrest Followed by Necrotic Cell Death in *Leishmania Donovanii*. *Antimicrobial Agents and Chemotherapy*, 59 (2015) 4782–4799.

Zhai S, Zhai B, An Q. Effect of preparation conditions on structural properties of PMHS-TEOS hybrid materials. *Journal of sol-gel science and technology*, 59(2011) 480–487.

Zhan X, Li JD, Huang JQ, Chen CX. Enhanced pervaporation performance of multi-layer PDMS/PVDF composite membrane for ethanol recovery from aqueous solution. *Applied Biochemistry and Biotechnology*, 160 (2010) 632–642.

Zhang H, Luo X, Xu J, Xiang B, Yu D. Synthesis of TiO₂/SiO₂ core/shell nanocable arrays. *Journal of Physical Chemistry B*, 108(2004)14866-14869.

Zhang J, Maurer FHJ, Yang M. In situ Formation of TiO₂ in Electrospun Poly (methyl methacrylate) Nanohybrids. *The Journal of Physical Chemistry C*, 115 (2011) 10431–10441.

Zhao Q, Qian JW, Zhu CX, An QF, Xu TQ, Zheng Q, Song YH. A novel method for fabricating polyelectrolyte complex/inorganic nano hybrid membranes with high isopropanol dehydration performance. *Journal of Membrane Science*, 345(2009) 233–241.

Zharov VP, Kim JW, Curiel DT, Everts, M. Self-Assembling Nanoclusters in Living Systems: Application for Integrated Photothermal Nanodiagnostics and Nanotherapy. *Nanomedicine Nanotechnology, Biology and Medicine*, 1 (2005) 326–345.

Zhou HL, Su Y, Chen XR, Yi SL, Wan YH. Modification of silicalite-1 by vinyltrimethoxysilane (VTMS) and preparation of silicalite-1 filled polydimethylsiloxane (PDMS) hybrid pervaporation membranes. *Separation and Purification Technology*, 75 (2010) 286–294.

Zhou J, Chen M, Qiao XG, Wu L. Facile preparation method of SiO₂/PS/TiO₂ multilayer core-shell hybrid microspheres. *Langmuir*, 22(2006) 10175-10179.

Zollinger H. Properties of Organic Dyes and Pigments in Color Chemistry. VCH Publishers, New York, 1978, pp. 92–102.