

DAFTAR PUSTAKA

- Abboud, M., Youssef, S., Podlecki, J., Habchi, R., Germanos, G. and Foucaran, A., 2015, Superparamagnetic Fe₃O₄ nanoparticles, synthesis and surface modification, *Mater. Sci. Semicond. Process.*, 39, 641–648.
- Ali, S., Mansoob, M., Omaish, M. and Hwan, M., 2015, Silver nanoparticles and defect-induced visible light photocatalytic and photoelectrochemical performance of Ag@m-TiO₂ nanocomposite, *Sol. Energy Mater. Sol. Cells.*, 141, 162–170.
- Beydoun, D., Amal, R., Low, G. and McEvoy, S., 2002, Occurrence and prevention of photodissolution at the phase junction of magnetite and titanium dioxide, *J. Mol. Catal. A Chem.*, 180(1–2), 193–200.
- Beydoun, D., Amal, R., Low, G.K.C. and McEvoy, S., 2000, Novel Photocatalyst: Titania-Coated Magnetite. Activity and Photodissolution, *J. Phys. Chem. B.*, 104(18), 4387–4396.
- Blanco, C., Granda, M., Patricia, A., Asenjo, N.G., Santamarí, R. and Mene, R., 2012, Correct use of the Langmuir – Hinshelwood equation for proving the absence of a synergy effect in the photocatalytic degradation of phenol on a suspended mixture of titania and activated carbon. *Carbon*, 5, 62–69.
- Cargnello, M., Gordon, T.R. and Murray, C.B., 2014, Solution-Phase Synthesis of Titanium Dioxide Nanoparticles and Nanocrystals, *Chem. Rev.*, 114, 9319–9345.
- Carp, O., Huisman, C.L. and Reller, A., 2004, Photoinduced reactivity of titanium dioxide, *Prog. Solid State Chem.*, 32(1–2), 33–177.
- Cheng, J.P., Ma, R., Chen, X., Shi, D., Liu, F. and Zhang, X.B., 2011, Effect of ferric ions on the morphology and size of magnetite nanocrystals synthesized by ultrasonic irradiation, *Cryst. Res. Technol.*, 46(7), 723–730.
- Cheng, J.P., Ma, R., Shi, D., Liu, F. and Zhang, X.B., 2011, Ultrasonics Sonochemistry Rapid growth of magnetite nanoplates by ultrasonic irradiation at low temperature, *Ultrason. sonochemistry.*, 18, 1038–1042.
- Corena, jose richardo alvarez, 2015, *Heterogeneous Photocatalysis for The Treatment of Contaminants of Emerging Concern In Water. Dissertation* Worcester Polytechnic Institute, Massachusetts.
- Cornell, R.M. and Schwertmann, U., 2003, *The Iron Oxides: Structure, Properties, Reactions, Occurrences and Uses*, Willey VCH Verlag GmbH and CO.

- Damato, T.C., De Oliveira, C.C.S., Ando, R.A. and Camargo, P.H.C., 2013, A facile approach to TiO₂ colloidal spheres decorated with Au nanoparticles displaying well-defined sizes and uniform dispersion, *Langmuir*, 29(5), 1642–1649.
- Dambournet, D., Belharouak, I. and Amine, K., 2010, Tailored preparation methods of TiO₂ anatase, rutile, brookite: Mechanism of formation and electrochemical properties, *Chem. Mater.*, 22(3), 1173–1179.
- Dou, H. and Choi, B.K.S., 2014, Effect of size of Fe₃O₄ magnetic nanoparticles on electrochemical performance of screen printed electrode using sedimentation field-flow fractionation, *J. Nanoparticle Res.*, 16, 2679.
- Fernández-Pazos, M.T., Garrido-Rodríguez, B., Nóvoa-Muñoz, J.C., Arias-Estévez, M., Fernández-Sanjurjo, M.J., Núñez-Delgado, A. and Álvarez, E., 2013, Cr(VI) adsorption and desorption on soils and biosorbents, *Water. Air. Soil Pollut.*, 224(1).
- Hoffmann, M.R., Martin, S., Choi, W. and Bahnemann, D.W., 1995, Environmental Applications of Semiconductor Photocatalysis, *Chem. Rev.*, 95(1), 69–96.
- Hon, K., Ling, B., Ibrahim, S. and Saravanan, P., 2014, Synthesis of surface plasmon resonance (SPR) triggered Ag/TiO₂ photocatalyst for degradation of endocrine disturbing compounds, *Appl. Surf. Sci.*, 319, 128–135.
- Hui, C., Shen, C., Tian, J., Bao, L., Ding, H., Li, C. and Tian, Y., 2011, Core-shell Fe₃O₄@SiO₂ nanoparticles synthesized with well-dispersed hydrophilic Fe₃O₄ seeds, *Nanoscale*, (3), 701–705.
- Idris, A., Hassan, N., Rashid, R. and Ngomsik, A., 2011, Kinetic and regeneration studies of photocatalytic magnetic separable beads for chromium (VI) reduction under sunlight, *J. Hazard. Mater.*, 186(1), 629–635.
- Jiang, C. and Lin, X., 2009, Electrochemical synthesis of Fe₃O₄-PB nanoparticles with core-shell structure and its electrocatalytic reduction toward H₂O₂, *J. Solid State Chem.*, 13, 1273–1278.
- Jing, J., Li, J., Feng, J., Li, W. and Yu, W.W., 2013, Photodegradation of quinoline in water over magnetically separable Fe₃O₄/TiO₂ composite photocatalysts, *Chem. Eng. J.*, 219, 355–360.
- Kamat, P. V., 2007, Meeting the clean energy demand: Nanostructure Architectures for Solar Energy Conversion, *Phys. Chem.*, 392, 2834–2860.

- Kang, Y.S., Risbud, S., Rabold, J.F. and Storoeeve, P., 1996, Synthesis and Characterization of Nanometer-Size Fe₃O₄ and gamma-Fe₂O₃ Particels, *Chem. Mater.*, 8(9), 2209–2211.
- Kumar, R., Rashid, J. and Barakat, M.A., 2015, Zero valent Ag deposited TiO₂ for the efficient photocatalysis of methylene blue under UV-C light irradiation. *Colloids Interface Sci. Commun.*, 5, 1–4.
- Kumar, S.G. and Devi, L.G., 2011, Review on Modified TiO₂ Photocatalysis under UV / Visible Light : Selected Results and Related Mechanisms on Interfacial Charge Carrier Transfer Dynamics, *J. Mater. Chem. A*, 115(46), 13211–13241.
- Lei, X.F., Xue, X.X. and Yang, H., 2014, Applied Surface Science Preparation and characterization of Ag-doped TiO₂ nanomaterials and their photocatalytic reduction of Cr(VI) under visible light, *Appl. Surf. Sci.*, 321, 396–403.
- Liu, R., Wang, P., Wang, X., Yu, H. and Yu, J., 2012, UV and Visible-Light Photocatalytic Activity of Simultaneously Deposited and Doped Ag/Ag(I)-TiO₂ Photocatalyst, *J. Phys. Chem. C*, (116), 17721–17728.
- Ma, J.Q., Guo, S.B., Guo, X.-H. and Ge, H.-G., 2015, Liquid-phase deposition of TiO₂ nanoparticles on core-shell Fe₃O₄@SiO₂ spheres: preparation, characterization, and photocatalytic activity, *J. Nanoparticle Res.*, 17(7), 307.
- Mahmoudi, M., Sant, S., Wang, B., Laurent, S. and Sen, T., 2011, Superparamagnetic iron oxide nanoparticles (SPIONs): Development, surface modification and applications in chemotherapy, *Adv. Drug Deliv. Rev.*, 63(1–2), 24–46.
- Mascolo, M.C., Pei, Y. and Ring, T.A., 2013, Room Temperature Co-Precipitation Synthesis of Magnetite Nanoparticles in a Large pH Window with Different Bases, *Materials.*, 6(12), 5549–5567.
- Mehranpour, H., Askari, M., Ghamsari, M.S. and State, S., 2012, LaMer theory approach to study the nucleation and growth of sol-gel derived TiO₂ nanoparticles, *Proc. 4th Int. Conf. Nanostructures.*, (1), 1710–1712.
- Moreira, K., Ricardo, C. and Tarley, T., 2015, Speciation analysis of chromium in water samples through sequential combination of dispersive magnetic solid phase extraction using mesoporous amino-functionalized Fe₃O₄/SiO₂ nanoparticles and cloud point extraction, *Microchem. J.*, 123, 185–195.

- Morel, A., Nikitenko, S.I., Gionnet, K., Wattiaux, A., Lai-kee-him, J., Labrugere, C., Chevalier, B., Deleris, G., Petibois, C., Brisson, A., Simonoff, M., Bordeaux, I., Vigneau, L.H. and Faculte, A., 2008, Sonochemical Approach to the Synthesis of $\text{Fe}_3\text{O}_4@/\text{SiO}_2$ Core Shell Nanoparticles with Tunable Properties, *ACS Nano.*, 2(5), 847–856.
- Ochiai, T. and Fujishima, A., 2012, Journal of Photochemistry and Photobiology C: Photochemistry Reviews Photoelectrochemical properties of TiO_2 photocatalyst and its applications for environmental purification, *J. Photochem. Photobiol. C Photochem. Rev.*, 13(4), 247–262.
- Okube, M., Yasue, T. and Sasaki, S., 2012, Residual-density mapping and site-selective determination of anomalous scattering factors to examine the origin of the Fe K pre-edge peak of magnetite, *J. Synchrotron Radiat.*, 19(5), 759–767.
- Palmer, C.D. and Wittbrodt, P.R., 1991, Processes Affecting the Remediation of. , 92(6), 25–40.
- Pechova, A. and Pavlata, L., 2007, Chromium as an essential nutrient : a review. *Veterinarni Medicina*, 2007(1), 1–18.
- Primo, A., Corma, A. and García, H., 2011, Titania supported gold nanoparticles as photocatalyst, *Phys. Chem. Chem. Phys.*, 13(3), 886–910.
- Rashid, M.H., Shahtahmasebi, N. and Roknabadi, M.R., 2013, Study of structural and magnetic properties of superparamagnetic $\text{Fe}_3\text{O}_4/\text{SiO}_2$ core-shell nanocomposites synthesized with hydrophilic citrate-modified Fe_3O_4 seeds via a sol-gel approach, *Phys. E Low-dimensional Syst. Nanostructures.*, 53, 207–216.
- Selvi, K., Pattabhi, S. and Kadirvelu, K., 2001, Removal of Cr(VI) from aqueous solution by adsorption onto activated carbon, *Bioresour. Technol.*, 80(1), 87–89.
- Siboni, M.S., Samadi, M.-T., Yang, J.-K. and Lee, S.-M., 2012, Photocatalytic removal of Cr(VI) and Ni(II) by UV/ TiO_2 : kinetic study, *Desalin. Water Treat.*, 40(1–3), 77–83.
- Suwarnkar, M.B., Dhabbe, R.S., Kadam, A.N. and Garadkar, K.M., 2014, Enhanced photocatalytic activity of Ag doped TiO_2 nanoparticles synthesized by a microwave assisted method, *Ceram. Int.*, 40(4), 5489–5496.

- Wahyuni, E., Aprilita, N., Hatimah, H., Wulandari, A. and Mudasir, M., 2015, Removal of Toxic Metal Ions in Water by Photocatalytic Method, *Am. Chem. Sci. J.*, 5(2), 194–201.
- Xin, B., Jing, L., Ren, Z., Wang, B. and Fu, H., 2005, Effects of simultaneously doped and deposited Ag on the photocatalytic activity and surface states of TiO_2 , *J. Phys. Chem. B.*, 109(7), 2805–2809.
- Xin, T., Ma, M., Zhang, H., Gu, J., Wang, S., Liu, M. and Zhang, Q., 2014, Applied Surface Science A facile approach for the synthesis of magnetic separable $\text{Fe}_3\text{O}_4/\text{TiO}_2$ core-shell nanocomposites as highly recyclable photocatalysts, *Appl. Surf. Sci.*, 288, 51–59.
- Yamaura, M., Camilo, R., Sampaio, L., Macêdo, M., Nakamura, M. and Toma, H., 2004, Preparation and characterization of (3-aminopropyl)triethoxysilane-coated magnetite nanoparticles, *J. Magn. Mater.*, 279(2–3), 210–217.
- Yang, D., Sun, Y., Tong, Z., Tian, Y., Li, Y. and Jiang, Z., 2015, Synthesis of Ag/ TiO_2 Nanotube Heterojunction with Improved Visible-Light Photocatalytic Performance Inspired by Bioadhesion, *J. Phys. Chem. C*, 119, 5827–5835.
- Yang, Y., Wang, G., Deng, Q., Ng, D.H.L. and Zhao, H., 2014, Microwave-Assisted Fabrication of Nanoparticulate TiO_2 Microspheres for Synergistic Photocatalytic Removal of Cr(VI) and Methyl Orange, *ACS Appl. Mater. Interfaces.*, (6), 3008–3015.
- Yanga, J.K., Leeb, S.M., Farrokhic, M., Giahid, O. and Sibonic, M.S., 2012, Photocatalytic removal of Cr (VI) with illuminated TiO_2 . *Desalination and Water Treatment*, 46(1–3), 375–380.
- Yoon, K.Y., Xue, Z., Fei, Y., Lee, J.H., Cheng, V., Bagaria, H.G., Huh, C., Bryant, S.L., Kong, S.D., Ngo, V.W., Rahmani, A.-R., Ahmadian, M., Ellison, C.J. and Johnston, K.P., 2015, Control of magnetite primary particle size in aqueous dispersions of nanoclusters for high magnetic susceptibilities, *J. Colloid Interface Sci.*, 462, 359–367.
- Yu, J., Zhao, L. and Cheng, B., 2006, Facile preparation of monodispersed $\text{SiO}_2/\text{TiO}_2$ composite microspheres with high surface area, *Mater. Chem. Phys.*, 96, 311–316.
- Yuan, Q., Li, N., Geng, W., Chi, Y. and Li, X., 2012, Preparation of magnetically recoverable $\text{Fe}_3\text{O}_4/\text{SiO}_2/\text{meso-TiO}_2$ nanocomposites with enhanced photocatalytic ability, *Mater. Res. Bull.*, 47(9), 2396–2402.

- Zayed, A.M. and Terry, N., 2003, Chromium in the environment: Factors affecting biological remediation, *Plant Soil*, 249(1), 139–156.
- Zhan, J., Zhang, H. and Zhu, G., 2014, Magnetic photocatalysts of cenospheres coated with Fe₃O₄/TiO₂ core/shell nanoparticles decorated with Ag nanopartilces. *Ceram. Int.*, 40(6), 8547–8559.
- Zhang, H., Wang, G., Chen, D., Lv, X. and Li, J., 2008, Tuning Photoelectrochemical Performances of Ag-TiO₂ Nanocomposites via Reduction/Oxidation of Ag, *Chem. Mater*, 20(9), 6543–6549.
- Zhang, J., Zhou, P., Liu, J. and Yu, J., 2014, New understanding of the difference of photocatalytic activity among anatase , rutile and brookite TiO₂, *Phys. Chem. Chem. Phys.*, 16(August), 20382–20386.
- Zhang, N., Yu, X., Hu, J., Xue, F. and Ding, E., 2013, Synthesis of silver nanoparticles coated poly (styrene-co-sulfonic acid) hybrid materials and their application in surface-enhanced Raman scattering (SERS), *RSC Adv.*, 3, 13740–13747.
- Zheng, S., Jiang, W., Rashid, M., Cai, Y., Dionysiou, D.D. and Shea, K.E.O., 2015, Selective Reduction of Cr(VI) in Chromium, Copper and Arsenic (CCA) Mixed Waste Streams Using UV/TiO₂ Photocatalysis, *molecules*, (Vi), 2622–2635.
- Zhu, Q., Peng, Y., Fan, C., Gao, G.Q., Wang, R.X. and Xu, A.W., 2014, Stable blue TiO₂ nanoparticles for efficient visible light photocatalysts, *J. Mater. Chem. A*, (2), 4429–4437