

## 5. Bibliografía

- . Ansari, S. A., Husain, Q. 2012. Potential applications of enzymes immobilized on/in nano materials: A review. *Biotechnol. Adv.*, 30, 512–523.
- . Dalal, S. & Gupta, M. N. 2007. Treatment of phenolic wastewater by horseradish peroxidase immobilized by bioaffinity layering. *Chemosphere*, 67(4):741-7.
- . Demarche, P., Junghanns, C., Nair, R. R. & Agathos, S. N. 2012. Harnessing the power of enzymes for environmental stewardship. *Biotechnol Adv*, 30(5):933-53.
- . Doll, T. E. & Frimmel, F. H. 2003. Fate of pharmaceuticals photodegradation by simulated solar UV-light. *Chemosphere* 52: 1757– 1769.
- . Dunford, H. B. 1999. Heme Peroxidases. John Wiley and Sons Inc.
- . Fernandez-Lafuente, R. 2009. Stabilization of multimeric enzymes: Strategies to prevent subunit dissociation. *Enzym. Microb. Technol.*, 45, 405–418.
- . Ferrari, B., Paxe'us, N., Giudice, R.L., Pollio, A. & Garric, J. 2003. Eco-toxicological impact of pharmaceuticals found in treated waste-waters: Study of carbamazepine, clofibric acid, and diclofenac. *Ecotoxicol Environ Saf*, 55:359–370.
- . Garcia-Galan, C., Berenguer-Murcia, A., Fernandez-Lafuente, R., Rodrigues, R.C. 2011. Potential of different enzyme immobilization strategies to improve enzyme performance. *Adv. Synth. Catal.*, 353, 2885–2904.
- . Gholami-Borujeni, F., Mahvi, A. H., Naseri, S., Faramarzi, M. A., Nabizadeh, R. &

Alimohammadi, M. 2011. Application of immobilized horseradish peroxidase for removal and detoxification of azo dye from aqueous solution. Res J Chem. Environ, 15(2):217-22.

- . Gómez, J. L., Bódalo, A., Gómez, E., Bastida, J., Hidalgo, A. M. 2006. Immobilization of peroxidases on glass beads: An improved alternative for phenol removal. Chemical Engineering Department, University of Murcia.
- . Guzik, U., Hupert-Kocurek, K., Wojcieszyska, D. 2014. Immobilization as a Strategy for Improving Enzyme Properties-Application to Oxidoreductases. Molecules, 19, 8995–9018.
- . Hamad, I. S. & Ahmed, A. A. 2013. Biodegradation of phenols in wastewater using crude peroxidases from five weed plants. Chemical and Pharmaceutical Research, 5(4):60-65.
- . Hwang, E. T., Gu, M. B. Enzyme stabilization by nano/microsized hybrid materials. 2013. Eng. Life Sci., 13, 49–61.
- . Hejri S. & Saboora, A. (009. Removal of Phenolic Compounds from Synthetic Wastewaters by Enzymatic Treatments. Journal of Science, 35, 13-19.
- . Idris, A. & Saed, K. 2002. Degradation of phenol in wastewater using anolyte produced from electrochemical generation of brine solution. Global Nest: the International Journal, 4, 139 -144.
- . Kawakami, Y., Monobe, M., Kuwabara, K., Fujita, T., Maeda, M., Fujino, O., Fukunaga, Y. 2006. A comparative study of nitric oxide, glutathione, and glutathione peroxidase

activities in cerebrospinal fluid from children with convulsive diseases/children with aseptic meningitis. *Brain and Development*, 28, 243-246.

- . Kawano T. 2003. Roles of the reactive oxygen species-generating peroxidase reactions in plant defense and growth induction. *Plant Cell Reports* 21, 829-837.
- . Klebanoff, S. J. 2005. Myeloperoxidase: friend and foe. *Journal of Leukocyte Biology*, 77, 598-625.
- . Kolpin, D. W., Furlong, E. T., Meyer, M. T., Thurman, E. M., Zaugg, S. D., Barber, L. B., Buxton, H. T. 2002. Pharmaceuticals, Hormones, and Other Organic Wastewater Contaminants in U.S. Streams, 1999–2000: A National Reconnaissance. *Environ. Sci. Technol*, 36 (6):1202-1211.
- . Lau D., Baldus, S. 2006. Myeloperoxidase and its contributory role in inflammatory vascular disease. *Pharmacology & therapeutics*, 111(1):16-26.
- . Lai Y. C., Lin S. C. 2005. Application of immobilized horseradish peroxidase for the removal of p-chlorophenol from aqueous solution. *Process Biochem*; 40:1167–74.
- . Lee, H. B. & Peart, T. E. 2002. Organic Contaminants in Canadian Municipal Sewage.
- . Liu, W., Wang W. C., Li. H. S., Zhou, X. 2011. Immobilization of horseradish peroxidase on silane-modified ceramics and their properties: potential for oily wastewater treatment. *Water Sci Technol*, 63(8):1621-8.
- . Lubos, E., Loscalzo, J., Handy, D. E. 2011. Glutathione peroxidase-1 in health and disease: from molecular mechanisms to therapeutic opportunities. *Antioxidant Redox*

Signal. Mary Ann Liebert, Inc. Publishers, 15, 1957-1997.

- . Naghibi F., Pourmorad F., Honary S., Shamsi M. 2003. Decontamination of Water Polluted with Phenol Using Raphanus sativus Root. *Iranian Journal of Pharmaceutical Research*. 2, 29-32.
- . Netto C. G. C. M., Toma H. E., Andrade L. H. 2013. Superparamagnetic nanoparticles as versatile carriers and supporting materials for enzymes. *J. Mol. Catal. B Enzym.*, 85–86, 71–92.
- . Nicell J. A. & Wright H. 1997. A model peroxidase activity with inhibition by hydrogen peroxide. *Enzyme Microb. Technol.* 21: 302-309.
- . Nicell J. A., Saadi K. W., Buchanan I. D. 1995. Phenol polymerization and precipitation by horseradish peroxidase anzyme and an additive. *Bioresource Technology*, 4:5-16.
- . Passardi F., Bakalovic N., Teixeira F. K., Margis-Pinheiro M., Penel C. & Dunand C. 2007. Prokaryotic origins of the non-animal peroxidase superfamily and organelle-mediated transmission to eukaryotes. *Genomics*, 89(5):567-579.
- . Preethi S., Anumary A., Ashokkumar A., Thanikaivelan P. 2013. Probing horseradish peroxidase catalyzed degradation of azo dye from tannery wastewater. *SpringerPlus*, 2:341.
- . Sanz, M. L., Parra, A., Prieto, I., Dieguez, I. & Oehling, A. K. 1997. Serum eosinophil peroxidase (EPO) levels in asthmatic patients. *Allergy*, 52(4):417-422.
- . Siddique M. H, St Pierre C. C., Biswas N., Bewtra J. K., Taylor K. E. 1993. Immobilized

enzyme catalyzed removal of 4-chlorophenol from aqueous solution. Water Res. 27:883-90.

- . Singh N., Singh J. 2005. An enzymatic method for removal of phenol from industrial effluent. Prep Biochem Biotechnol; 32:127–33.
- . Stanisavljević, M. & Nedić, L. 2005. Removal of phenol from industrial wastewaters by horseradish (*Cochlearia armoracia* L) peroxidase. Facta Universitatis, 2(4):345–349.
- . Tatsumi, K., Wada, S., Ichikawa, H. 1996. Removal of chlorophenols from wastewater by immobilized horseradish peroxidase. Biotechnology and Bioengineering, 51: 126-13.