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Area of specialization: Biocatalysis, Biorefinery, Sludge Valorization, Platform Chemicals

List of publications for the last five years

1. K Saikia, AK Rathankumar, VK Vaithyanathan, H Cabana, **V Vinoth Kumar**, 2021. "Preparation of highly diffusible porous cross-linked lipase B from *Candida antarctica* conjugates: Advances in mass transfer and application in transesterification of 5-Hydroxymethylfurfural", *International Journal of Biological Macromolecules* 170, 583 – 592
2. K Saikia, AK Rathankumar, P Senthil Kumar, S Varjani, M Nizar, R Lenin, **V Vinoth Kumar**, 2021 "Recent advances in biotransformation of 5-Hydroxymethylfurfural: Challenges and future aspects", *Journal of Chemical Technology & Biotechnology*, First published: 16 January 2021, <https://doi.org/10.1002/jctb.6670>
3. AK Rathankumar, K Saikia, MH Ribeiro, CK Cheng, M Purushothaman, **V Vinoth Kumar**, 2021. "Application of statistical modeling for the production of highly pure rhamnolipids using magnetic biocatalysts: Evaluating its efficiency as a bioremediation agent", *Journal of Hazardous Materials*, 125323.
4. AK Rathankumar, S Ravindran, K Saikia, V Arvind, RA Batista-Garcia, **V Vinoth Kumar**, 2020. "Simultaneous pretreatment and saccharification process for fermentable sugars production from *casuarina equisetifolia* biomass using transgenic *trichoderma atroviride*", *Journal of the Air & Waste Management Association* 70 (12), 1244-1251.
5. K Saikia, AK Rathankumar, K Ramachandran, H Sridharan, P Bohra, **V Vinoth Kumar**, 2020. "A comparative study on the chemo-enzymatic upgrading of renewable biomass to 5-hydroxymethylfurfural", *Journal of the Air & Waste Management Association* 70 (12), 1218-1226.
6. K Saikia, PS Kumar, AK Rathankumar, S SaiLavanyaa, L Srinivasan, **V Vinoth Kumar**, 2020, "Amino-functionalised mesoporous silica microspheres for immobilisation of *Candida antarctica* lipase B—application towards greener production of 2, 5-furandicarboxylic acid", *IET nanobiotechnology* 14 (8), 732-738.
7. AK Rathankumar, S SaiLavanyaa, K Saikia, A Gururajan, S Sivanesan, **V Vinoth Kumar**, 2019, "Systemic Concocting of Cross-Linked Enzyme Aggregates of *Candida antarctica* Lipase B (Novozyme 435) for the Biomanufacturing of Rhamnolipids", *Journal of Surfactants and Detergents* 22 (3), 477-490.
8. D González-Abradelo, Y Pérez-Llano, H Peidro-Guzmán, , **V Vinoth Kumar**, 2019, "First demonstration that ascomycetous halophilic fungi (*Aspergillus sydowii* and *Aspergillus destruens*) are useful in xenobiotic mycoremediation under high salinity conditions", *Bioresource technology* 279, 287-296.

9. Neeraj G., Shobana R., **V Vinoth Kumar**, (2018) "Immobilized inulinase: A new horizon of paramount importance driving the production of sweetener and prebiotics", *Critical Reviews in Biotechnology*, 38(3), 409-422.
10. Vandana M.J. Shriaiaishvarya K.R., Thekkudan V.N., Hridya R., **V Vinoth Kumar**, (2017) "Mesoporous titanium dioxide nanocatalyst: A recyclable approach for one-pot synthesis of 5-hydroxymethylfurfural", *IET Nanobiotechnology*, 11(6), 690-694.
11. Batista-García R.A., **V Vinoth Kumar**, Ariste A, Savary O., Cabana H., Folch-Mallol J.L. (2017) Simple screening protocol for identification of potential mycoremediation tools for the elimination of polycyclic aromatic hydrocarbons and phenols from hyperalkalophile industrial effluents, *Journal of Environmental Management*, 198, 1-11.
12. Vishnu D., Neeraj G., Swaroopini R., Shobana R., **V Vinoth Kumar**, Cabana H. (2017) "Synergetic integration of laccase and versatile peroxidase with magnetic silica microspheres towards remediation of biorefinery wastewater", *Environment Science and Pollution Research*, 24(22), 17993-18009.
13. Kumar M. A., Poonam S., **V Vinoth Kumar**, Anuradha D., Sivanesan S., (2017) "Mineralization of aromatic amines liberated during the degradation of a sulfonated textile colorant using *Klebsiella pneumoniae* strain AHM", *Process Biochemistry*, 57, 181-89.
14. Saravanan A, Sundar Rajan P, Kumar, P.S., **V Vinoth Kumar**, (2017) "Surface adsorption of poisonous Pb(II) ions from water using chitosan functionalized magnetic nanoparticles". *IET Nanobiotechnology*, 11(4), 433-442.
15. Vinni N. T., Christy C., Sailavanya S., Kumar S.S., **V Vinoth Kumar**, (2017) "Review on nanoadsorbents: A solution for heavy metal removal from waste water", *IET Nanobiotechnology*, 11(3), 213-224.
16. Ba S., **V Vinoth Kumar**, (2017) "Recent developments in the use of tyrosinase and laccase in environmental applications", *Critical Reviews in Biotechnology*, 22, 1-14.
17. Kumar V. V., Cabana H. (2016) "Towards high potential magnetic biocatalysts for on-demand elimination of pharmaceuticals" *Bioresource Technology*, 200, 81-89.
18. Neeraj G., Santhana R.K., Shriaishvarya K.R., **V Vinoth Kumar**, (2016) "Performance study on sequestration of copper ions from contaminated water using synthesized chitosan coated magnetic nanoparticles", *Journal of Molecular Liquids*, 214, 335-346.
19. Gerard N., Krishnan R.S., Cabana H., **V Vinoth Kumar**, (2016) "Adsorptive potential of dispersible chitosan coated iron-oxide nanocomposites toward the elimination of arsenic from aqueous solution". *Process Safety and Environmental Protection*, 104, 185-195.
20. Balcázar-López E, Méndez-Lorenzo LH, Batista-García RA, **V Vinoth Kumar**, Savary O., Cabana H., Herrera-Estrella A., Folch-Mallol J.L. (2016) Xenobiotic compounds degradation by heterologous expression of a *Trametes sanguineus* laccase in *Trichoderma atroviride*. *PLoS ONE* 11(2): e0147997. doi:10.1371/ journal.pone.0147997.
21. Arca-Ramos A., **V Vinoth Kumar**, Eibes G., Moreira MT., Cabana H. (2016) Recyclable cross-linked laccase aggregates coupled to magnetic silica microbeads for elimination of pharmaceuticals from municipal wastewater. *Environmental Science and Pollution Research*, 23(9), 8929-8939.