

LIST OF PUBLICATIONS

Faculty: Dr Niravkumar P Raval

Department of Environmental Science and Engineering

JOURNAL PUBLICATIONS

Silori, R., Zang, J., **Raval, N.P.**, Giri, B.S., Mahlkecht, J., Mora, A., Dueñas-Moreno, J., Tauseef, S.M., Kumar, M., 2023.. *Bioresour. Technol.* 387, 129537. (SCI-IF: 11.4).

<https://doi.org/10.1016/j.biortech.2023.129537>

Trivedi, M., Patel, C., Vaidya, D., **Raval, N. P.**, & Kumar, M., (2023) Exploration of the ameliorative effect of dietary polyphenol on Bisphenol-A prompted DNA damage by in vitro and in silico approaches. *J. Mol. Struct.* 1287, 135711. (SCI-IF: 3.8).

<https://doi.org/10.1016/j.molstruc.2023.135711>

Dhangar, K., Kumar, M., Aouad, M., Mahlkecht, J., & **Raval, N. P.**, (2023) Aggregation behaviour of black carbon in aquatic solution: Effect of ionic strength and coexisting metals. *Chemosphere.* 311(2), 137088. (SCI-IF: 8.8).

<https://doi.org/10.1016/j.chemosphere.2022.137088>

Raval, N. P., Priyadarshi, G. V., Mukherjee, S., Zala, H., Fatma, D., Bonilla-Petriciolet, A., Abdelmottaleb, B., Duclaux, L., & Trivedi M. H., (2022) Statistical physics modeling and evaluation of adsorption properties of chitosan-zinc oxide nanocomposites for the removal of an anionic dye. *J. Environ. Chem. Eng.* 10(6), 108873. (SCI-IF: 7.7).

<https://doi.org/10.1016/j.jece.2022.108873>

Raval, N. P., & Kumar M. (2022) Development of Novel Core–shell impregnated Polyuronate Composite Beads for an eco-efficient removal of arsenic. *Bioresour. Technol.* 364, 127918. (SCI-IF: 11.4). <https://doi.org/10.1016/j.biortech.2022.127918>

Priyadarshi, G., **Raval, N. P.**, & Trivedi M. H. (2022) Microwave-assisted synthesis of cross-linked chitosan-metal oxide nanocomposite for methyl orange dye removal from unary and complex effluent matrices. *Int. J. Biol. Macromol.* 219, 53-67. (SCI-IF: 8.2).

<https://doi.org/10.1016/j.ijbiomac.2022.07.239>

Kumar M., Mukherjee S., Takur A. K., **Raval, N. P.**, Ak A. N. & Gikas, P. (2022) Aminoalkyl-organo-silane treated sand for the adsorptive removal of arsenic from the groundwater: Immobilizing the mobilized geogenic contaminants. *J. Hazard. Mater.* 425, 127916. (SCI-IF: 13.6). <https://doi.org/10.1016/j.jhazmat.2021.127916>

Kumar, M., Dhangar, K., Thakur, A., Ram, B., Chaminda, T., Sharma, P., Kumar, A., **Raval, N. P.**, Srivastava, V., Rinklebe, J., Kuroda, K., Sonne, C., & Barcelo, D. (2021) Antidrug Resistance

in the Indian Ambient Waters of Ahmedabad during the COVID-19 Pandemic. *J. Hazard. Mater.* 416, 126125. (SCI-IF: 13.6).. <https://doi.org/10.1016/j.jhazmat.2021.126125>

Taki, K., **Raval, N. P.**, & Kumar M. (2021) Utilization of sewage sludge derived magnetized geopolymeric adsorbent for geogenic arsenic removal: A sustainable groundwater in-situ treatment perspective. *J. Clean Prod.* 295, 126466. (SCI-IF: 11.1).
<https://doi.org/10.1016/j.jclepro.2021.126466>

Raval, N. P., Mukherjee S., Shah, N. K., Gikas, P. & Kumar M. (2021) Hexametaphosphate cross-linked chitosan beads for the eco-efficient removal of organic dyes: Tackling water quality. *J. Environ. Manage.* 280, 111680. (SCI-IF: 8.7).
<https://doi.org/10.1016/j.jenvman.2020.111680>

Raval, N. P. & Kumar M. (2021) Geogenic arsenic removal through core–shell based functionalized nanoparticles: Groundwater in-situ treatment perspective in the post–COVID anthropocene. *J. Hazard. Mater.* 402, 123466. (SCI-IF: 13.6).
<https://doi.org/10.1016/j.jhazmat.2020.123466>

Vekariya, M. K., Vekariya, R. H., Patel, K. D., **Raval, N. P.**, Shah, P. U., Rajani, D. P., & Shah, N. K. (2018) Pyrimidine-Pyrazole Hybrids as Morpholinopyrimidine-Based Pyrazole Carboxamides: Synthesis, Characterization, Docking, ADMET Study and Biological Evaluation. *Chemistry Select* 3, 6998–7008. (IF: 2.1). <https://doi.org/10.1002/slct.201801011>

Raval, N. P., Shah, P. U. & Shah, N. K. (2017) Malachite Green "A Cationic Dye" and its removal from aqueous solution by adsorption: A review. *Applied Water Sci.* 7, 3407–3445. (IF: 5.5). <https://doi.org/10.1007/s13201-016-0512-2>

Raval, N. P., Shah, P. U., Ladha, D. G., Vekariya, M. K., Wadhwani, P. M. & Shah, N. K. (2017) Synthesis, Characterization and Adsorption significance of Novel Composite (Chitosan beads loaded nickel-oxide nanoparticles). *Desalination Water Treat.* 62, 387–402. (SCI–E-IF: 1.25).
<https://doi.org/10.5004/dwt.2017.0308>

Shah, P. U., **Raval, N. P.** & Shah, N. K. (2016) Cadmium(II) removal from an aqueous solution using CSCMQ grafted copolymer. *Desalination Water Treat.* 57, 28262–28273. (SCI–E-IF: 1.25). <https://doi.org/10.1080/19443994.2016.1178179>

Raval, N. P., Shah, P. U. & Shah, N. K. (2016) Adsorptive removal of nickel(II) ions from aqueous environment: A review. *J. Environ. Manage.* 179, 1–20. (SCI-IF: 8.7).
<https://doi.org/10.1016/j.jenvman.2016.04.045>

Shah, P. U., **Raval, N. P.**, Vekariya, M., Wadhwani, P. M. & Shah, N. K. (2016) Adsorption of lead (II) ions onto novel cassava starch 5-chloromethyl-8-hydroxyquinoline polymer from an aqueous medium. *Water Sci. Technol.* 74, 943–956. (SCI-IF: 2.7).
<https://doi.org/10.2166/wst.2016.284>

Raval, N. P., Shah, P. U. & Shah, N. K. (2016) Adsorptive amputation of hazardous azo dye Congo red from wastewater: a critical review. *Environ. Sci. Pollut. Res.* 23, 14810–14853. (IF: 5.8). <https://doi.org/10.1007/s11356-016-6970-0>

Raval, N. P., Shah, P. U. & Shah, N. K. (2016) Nanoparticles Loaded Biopolymer as Effective Adsorbent for Adsorptive Removal of Malachite Green from Aqueous Solution. *Water Conserv. Sci. Eng.* 1, 69–81. (IF: 2.0). <https://doi.org/10.1007/s41101-016-0004-0>

Raval, N. P., Shah, P. U., Ladha, D. G., Wadhvani, P. M. & Shah, N. K. (2016) Comparative study of chitin and chitosan beads for the adsorption of hazardous anionic azo dye Congo Red from wastewater. *Desalination Water Treat.* 57, 9247–9262. (SCI–E-IF: 1.25). <https://doi.org/10.1080/19443994.2015.1027959>

Shah, P. U., **Raval, N. P.** & Shah, N. K. (2015) Adsorption of copper from an aqueous solution by chemically modified cassava starch. *J Mater Env. Sci.* 6, 2573–2582. (IF: 0.29).

BOOK CHAPTERS

Raval, N. P. & Kumar, M. (2020) An Overview of Big Data Analytics: A State-of-the-Art Platform for Water Resources Management. In: Kumar M, Munoz-Arriola F, Furumai H, Chaminda T, (eds.) *Resilience, Response, and Risk in Water Systems: Shifting Management and Natural Forcings Paradigms*. Springer Nature. 43–56. ISBN: 9789811546686. (Citation: 02) https://link.springer.com/chapter/10.1007/978-981-15-4668-6_3

Shah, P. U., **Raval, N. P.** & Solanki, H. (2020) Removal of Copper (II) from aqueous solution by using CSCMQ In: Arya A, (eds.) *Environment at Crossroads: Challenges and Green Solutions*. Scientific Publishers India. 191. ISBN: 9789389184938. <https://www.scientificpub.com/book-details/Environment-at-Crossroads-Challenges-and-Green-Solutions-1154.html>

SELECTED FULL-LENGTH CONFERENCE PAPERS/ABSTRACTS

Raval, N. P., Duclaux, L., & Reinert, L., (2022) Fabrication of chitosan-based carbons for the eco-efficient removal of emerging contaminants from the wastewater. PhD Seminar Adsorption, held at Select Hotel Erlangen, Wetterkreuz 7, 91058 Erlangen, Germany. September 29 – 30, 2022. <https://www.tvt.tf.fau.eu/phd-seminar-adsorption/>

Kumar, M. & **Raval, N. P.** (2019) Synthesis and Characterization of geopolymer-iron nanocomposite for the adsorptive removal of arsenic. WIN Conference 2019: "Innovate and Empower to Accelerate Social Change, held at IIT–Gandhinagar. April 4–6, 2019.

Mukherjee, S., **Raval, N. P.**, Sahoo, S. & Kumar, M. (2019) Alginate beads and Oleic coated Iron nanoparticles mediated Arsenic removal from aqueous solution: A Groundwater in-situ remediation perspective, AGU Fall Meeting in San Francisco, California. USA December 9–13, 2019. <https://ui.adsabs.harvard.edu/abs/2019AGUFM.B12C..02M/abstract>.

Thakur, A., Kumar, M. & **Raval, N. P.** (2019) Sustainable use of Biochar and nano zero Valent Iron as composite for Permeable Reactive Barrier Material 19th IWA International

Conference on Diffuse Pollution and Eutrophication (DIPCON 2019), held at JEJU Islands, Korea October 27– 31, 2019.