Article

Environmentally Friendly Nanoporous Polymeric Gels for Sustainable Wastewater Treatment

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Supplementary Figures

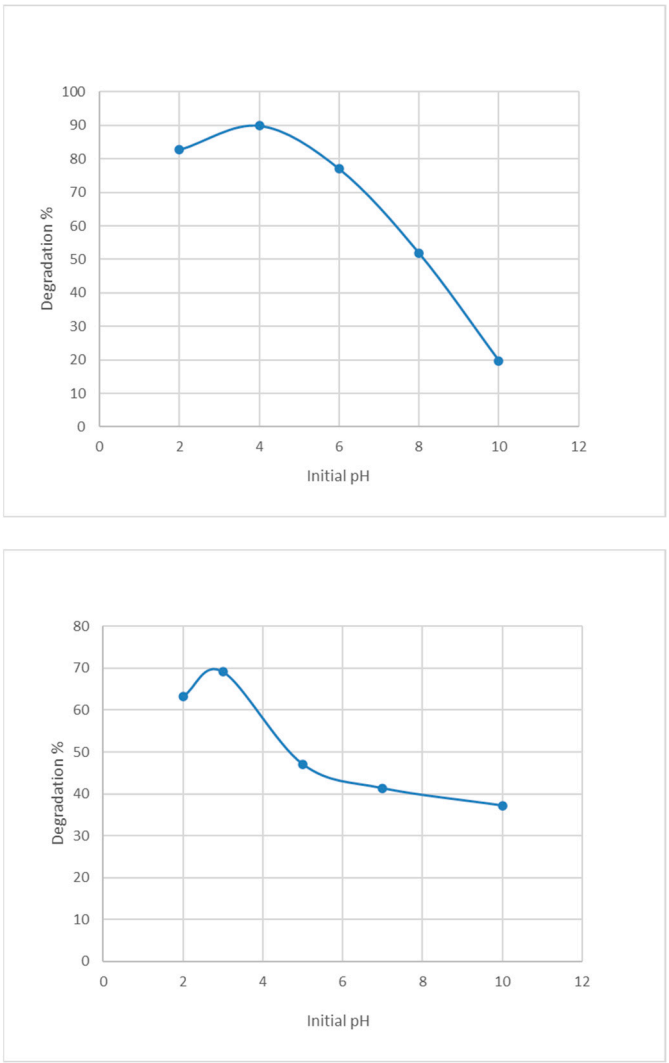

Figure S1. Effect of pH on the degradation of MB (Top) and CR (Bottom) dyes.

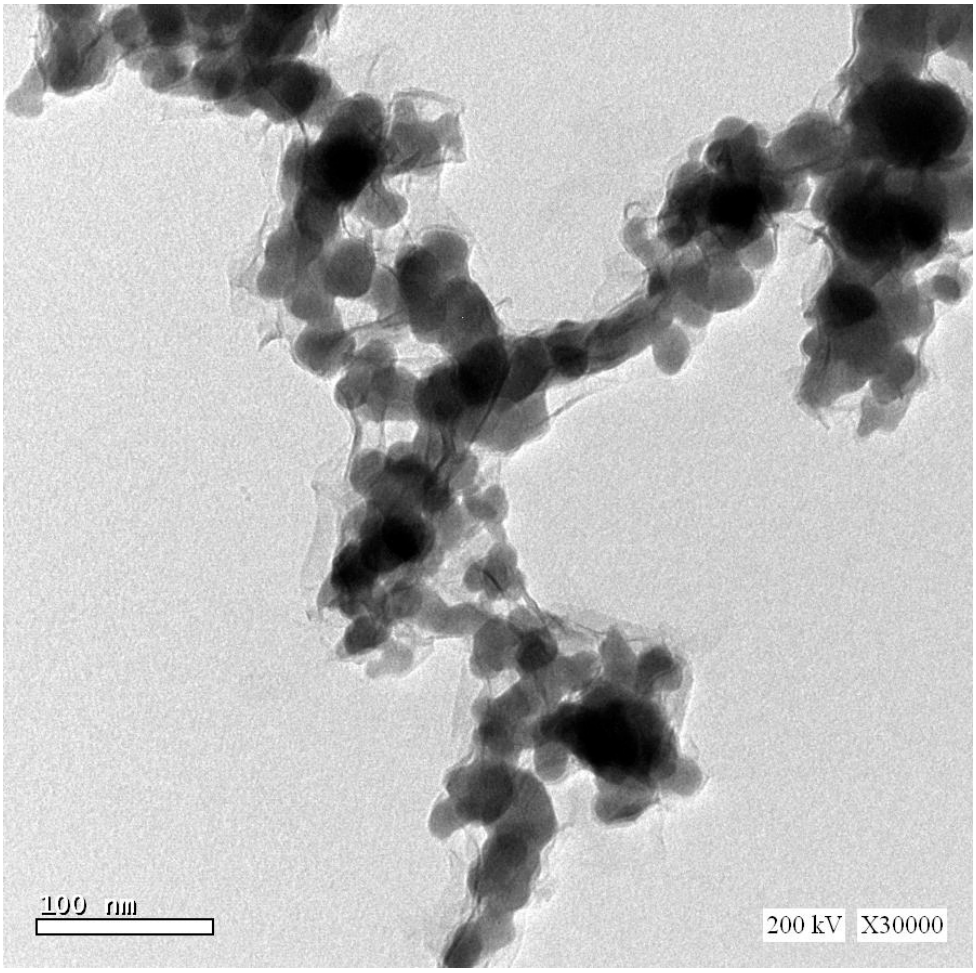

Figure S2. TEM images of the prepared Ni^0 nanoparticles.

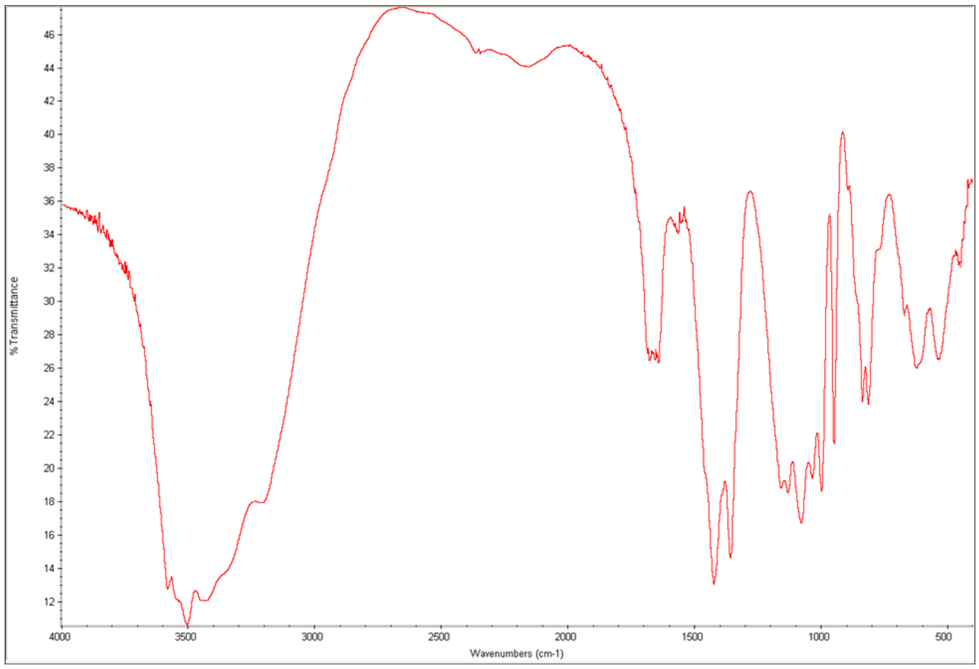

Figure S3. BET isotherms for the adsorption of nitrogen onto the unloaded gel (top panel) and the Ni-loaded gel (bottom panel).

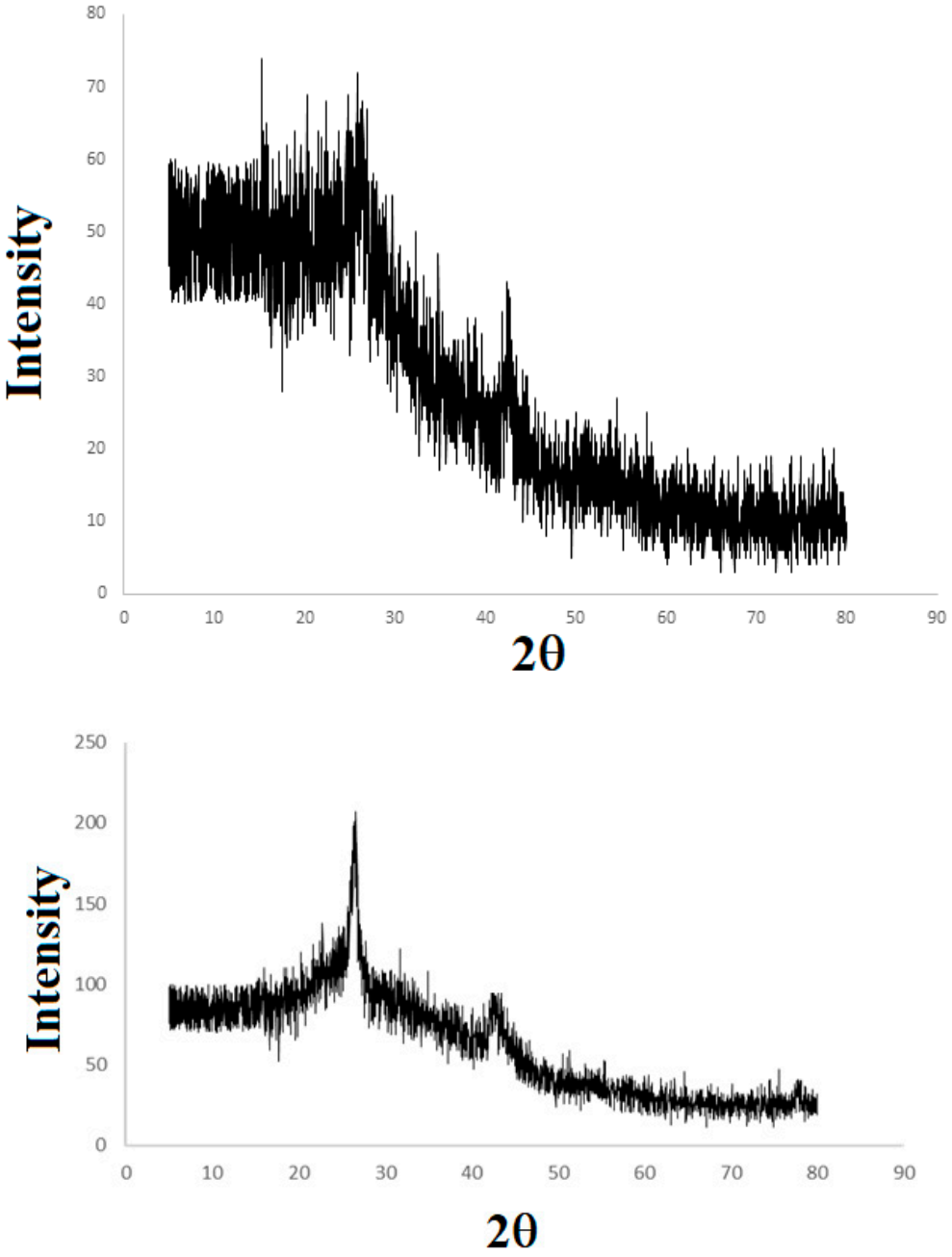

Figure S4. XRD of the unloaded (Top) and Ni^0-loaded gels (Bottom).

Table S1. Comparison of the surface area and pore size of the prepared unloaded and Ni^0-loaded gels with other biobased polymer gels from previous studies.

Biobased Polymer Gel System	Surface Area (m^2/g)	Pore Size (nm)
Unloaded PLA/TPU/PEO gels	5.98	6.7
Impregnated PLA/TPU/PEO gels	8.5	9.8
Cellulose-Based gels[1,2]	~300	~10
Chitosan-Silica Hybrid gels[1,3]	~450	~30
Starch-Based Polymer gels[1]	~250	~50
Protein-based gels (e.g., Soy Protein) [1,3]	~200	~20

References:

1. Ganesan, K.; Budtova, T.; Ratke, L.; Gurikov, P.; Baudron, V.; Preibisch, I.; Niemeyer, P.; Smirnova, I.; Milow, B. Review on the Production of Polysaccharide Aerogel Particles. *Materials.* 2018, 11, 2144.
2. Groen, J.C.; Peffer, L.A.A.; Pérez-Ramírez, J. Pore Size Determination in Modified Micro- and Mesoporous Materials. Pitfalls and Limitations in Gas Adsorption Data Analysis. *Microporous Mesoporous Mater*. 2003, 60, 1–17.
3. Horvat, G.; Pantić, M.; Knez, Ž.; Novak, Z. Brief Evaluation of Pore Structure Determination for Bioaerogels. *Gels.* 2022, 8, 438.