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Wydział Chemii



Warsaw, May 7th 2026

**Justification of distinction of the doctorate thesis by Ms. Simran Chaudhary  
„Porosity and dynamics in crystalline materials of transition metal complexes  
based on dipodal N-donor ligands and related solid-state phenomena”**

Taking into account the very high scientific level of the research carried out and the very valuable publication achievements of the doctoral student, I am appealing to the Scientific Council of the Discipline of Chemical Sciences of the Nicolaus Copernicus University in Toruń to award a distinction for the doctoral thesis of Ms. Simran Chaudhary. In my opinion, this work represents a highly significant contribution to the field of solid-state chemistry, particularly to the engineering of microporous crystalline materials capable of molecular adsorption. The study focuses on systems based on discrete metallocycles and low-dimensional (1D) coordination polymers constructed from semi-rigid and flexible dipodal imidazole-based ligands. Beyond their synthesis, the obtained crystals were subjected to solid-state transformations and thoroughly investigated using a wide range of physicochemical methods, including thermogravimetric analysis as well as single-crystal and powder X-ray diffraction techniques. These studies provided valuable insight into the dynamic behavior of the investigated materials, with some of the observed single-crystal-to-single-crystal transformations being particularly impressive. The dissertation is presented in a remarkably mature and professional manner, clearly demonstrating Ms. Chaudhary's outstanding competence and scientific proficiency. The research described in this work is both ambitious and experimentally demanding, and it constitutes a valuable contribution that deserves high recognition. I believe that the results obtained in this study will inspire further synthetic approaches toward related compounds and support the development of more efficient sorption materials of considerable practical importance. It is also worth emphasizing that Ms. Chaudhary is the author of six scientific articles published in *CrystEngComm*, *Crystals* (two papers), *RSC Advances*, *Polyhedron* and *Acta Crystallographica B*, which include results presented in this dissertation as well as related investigations. Notably, she is the first author of four of these publications. In addition, she presented the results of her research at three international and six national conferences, in most cases delivering oral presentations. In my opinion, Ms. Chaudhary is an exceptionally talented young researcher, and her doctoral thesis fully merits recognition.

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