WILSON SONSINI

Dan Gil

PATENT AGENT

Patents and Innovations

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FOCUS AREAS

Artificial Intelligence and Machine Learning

Biotech

Intellectual Property

Life Sciences

Patents and Innovations

EXPERIENCE

Dr. Dan Gil is a patent agent at Wilson Sonsini Goodrich & Rosati. He focuses on strategic intellectual property counseling for various fields including biomarker discovery, drug discovery, algorithms, and chemical and materials engineering.

Prior to joining the firm, Dan was a postdoctoral researcher at University Chicago, in Professor Juan de Pablo's group, researching polymer reactions and polymer dynamics using generative artificial intelligence algorithms.

Dan obtained his Ph.D. from Case Western Reserve University while studying with Professor Daniel J. Lacks, where he applied computational chemistry (e.g., molecular dynamics and electronic structure calculations) to study the science of contact in various contexts, including contact electrification, ionic liquids at electrochemical interfaces, single-stranded DNA brushes on surfaces, and surfaces of complex liquids.

CREDENTIALS

Education

- Ph.D., Chemical Engineering, Case Western Reserve University
- B.S., Chemical Engineering, Case Western Reserve University

Admissions

- U.S. Patent and Trademark Office

INSIGHTS

Select Publications

- Co-author with M.A. Webb, N.E. Jackson, and J. J. de Pablo, "Targeted sequence design within the coarse-grained polymer genome," *Sci. Adv.*, 2020
- Co-author with D. J. Lacks, "Humidity transforms immobile surface charges into mobile charges during triboelectric charging," *Phys. Chem. Chem. Phys.*, 2019
- Co-author with S.J. Jorgenson, A.A. Riet, and D.J. Lacks, "Relationships between molecular structure, interfacial structure, and dynamics of ionic liquids near neutral and charged surfaces," *J. Phys. Chem. C,* 2018
- Co-author with D.J. Lacks, P. Parisse, L. Casalis, and M.D. Nkoua Ngavouka, "Single-stranded DNA oligomer brush structure is dominated by intramolecular interactions mediated by the ion environment," *Soft Matter*, 2018
- Co-author with A.E. Wang, M. Holonga, Z. Yavuz, H.T. Baytekin, R.M. Sankaran, and D.J. Lacks, "Dependence of triboelectric charging behavior on material microstructure," *Phys. Rev. Mat.*, 2017
- Co-author with L. Han, D. Iguchi, T.R. Heyl, V.M. Sedwick, C.R. Arza, S. Ohashi, D.J. Lacks, and H. Ishida, "Oxazine ring-related vibrational modes of benzoxazine monomers using fully

aromatically substituted, deuterated, 15N isotope exchanged, and oxazine-ring-substituted compounds and theoretical calculations," *J. Phys. Chem. A*, 2017

- Co-author with D.J. Lacks, "Effect of surfactant shape on solvophobicity and surface activity in alcohol-water systems," *J. Chem. Phys.,* 2016
- Co-author with D. J. Lacks, "Geometric origins of surfactant effectiveness in mixed solvent systems," *J. Phys. Chem. C*, 2015
- Co-author with A.N. Htet and D. J. Lacks, "Surface activity of octanoic acid in ethanol-water solutions from molecular simulation and experiment," *J. Chem. Phys.*, 2015