

Resource Summary Report

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DelPhi

RRID:SCR_008669

Type: Tool

Proper Citation

DelPhi (RRID:SCR_008669)

Resource Information

URL: http://wiki.c2b2.columbia.edu/honiglab_public/index.php/Software:DelPhi

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Description: DelPhi provides numerical solutions to the Poisson-Boltzmann equation (both linear and nonlinear form) for molecules of arbitrary shape and charge distribution. The current version is fast, accurate, and can handle extremely high lattice dimensions. It also includes flexible features for assigning different dielectric constants to different regions of space and treating systems containing mixed salt solutions. DelPhi takes as input a coordinate file format of a molecule or equivalent data for geometrical objects and/or charge distributions and calculates the electrostatic potential in and around the system, using a finite difference solution to the Poisson-Boltzmann equation. DelPhi is a versatile electrostatics simulation program that can be used to investigate electrostatic fields in a variety of molecular systems. Features of DelPhi include solutions to mixtures of salts of different valence; solutions to different dielectric constants to different regions of space; and estimation of the best relaxation parameter at run time.

Resource Type: simulation software, software application, software resource

Keywords: Poisson-Boltzmann equation, electrostatics, simulation software, mixed salt solution

Funding: NSF DBI-9904841

Resource Name: DelPhi

Resource ID: SCR_008669

Alternate IDs: nif-0000-33392

Record Creation Time: 20220129T080248+0000

Record Last Update: 20260912T195707+0000

Ratings and Alerts

No rating or validation information has been found for DelPhi.

No alerts have been found for DelPhi.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We found 1448 mentions in open access literature.

Listed below are recent publications. The full list is available at [SPARC SAWG](#) .

Yesilkaya MI, et al. (2026) Evaluation of large language models in cardiovascular surgery: a comparative study of board-level clinical question answering and generation. Journal of cardiothoracic surgery, 21(1).

Vianna CM, et al. (2026) Risk factors for post-COVID-19 condition: A case-control study in municipalities of Paraíba and Rio de Janeiro, Brazil. The Brazilian journal of infectious diseases : an official publication of the Brazilian Society of Infectious Diseases, 30(2), 105807.

Guzmán Priego CG, et al. (2026) Cognitive and Neuropsychiatric Sequelae After SARS-CoV-2 Infection: A Narrative Review and Exploratory Cross-Sectional Study of Neurofilament Light Chain and GFAP. Brain sciences, 16(3).

Rodrigues FEP, et al. (2026) Constant-pH Molecular Dynamics of Cationic Peptide Dendrimers Binding to siRNA. Journal of chemical information and modeling, 66(8), 4734.

Allen JA, et al. (2026) Consensus Definitions of Disease Activity and Clinical Outcomes in Patients With Chronic Inflammatory Demyelinating Polyradiculoneuropathy. Neurology, 107(1), e218159.

Von Fritschen U, et al. (2026) Toward Successful International Pooling of Breast Implant Registry Data: The Role of Dataset Uniformity. Aesthetic surgery journal. Open forum, 8, oja070.

Majercak KR, et al. (2026) What Is Important to Patients? A Mixed Methods Study to Understand Patient Experience Commonalities Across Three Conditions. The patient, 19(3), 465.

Rodrigues FEP, et al. (2026) In Silico Structural Analysis of the Grapevine Serine Protease VvSBT4.19 Involved in Defense against *P. viticola*. Journal of agricultural and food chemistry, 74(1), 1724.

Brown JB, et al. (2026) Establishing a Consensus-Based Definition of Air Medical Transport Need for Rural Patients After Injury: Results from a Delphi Survey. Prehospital

emergency care, 1.

Boshier PR, et al. (2026) Management of gastric cancer peritoneal metastasis: International Gastric Cancer Association GCPM Working Group consensus statements. The British journal of surgery, 113(4).

Lau N, et al. (2026) Mobile Health App Attitudes and Adoption Among Oncology Providers: Cross-Sectional National Survey. Journal of medical Internet research, 28, e85583.

Leng M, et al. (2026) Development and validation of the Good Limb Position Management Scale for Stroke Patients with Hemiplegia by Nurses: a cross-sectional study. BMJ open, 16(6), e103851.

Abaalkhail F, et al. (2026) Metabolic dysfunction-associated steatotic liver disease management in Saudi Arabia: A modified Delphi-based adaptation of international standards. Saudi journal of gastroenterology : official journal of the Saudi Gastroenterology Association, 32(2), 104.

Ren Z, et al. (2026) Construction of an index system for assessing emergency department overcrowding in Chinese tertiary hospitals: a Delphi study. BMC emergency medicine, 26(1), 41.

Oliveira NFB, et al. (2026) Improving the Estimation of pKa Values for All Titratable Amino Acids at the Water/Membrane Interface. The journal of physical chemistry. B, 130(16), 4270.

Iuliucci K, et al. (2026) Through the Prism: Shining Light on LGBTQIA+ Applicant Identities and Influences. The western journal of emergency medicine, 27(3), 698.

Poudel P, et al. (2026) From extracellular entry to intracellular release: A water-assisted transport cycle for creatine in SLC6A8. Protein science : a publication of the Protein Society, 35(7), e70671.

Staudt LA, et al. (2026) Selective Control Assessment of the Lower Extremity for Infants and Toddlers (Mini-SCALE): Development and validation of a clinical assessment. Developmental medicine and child neurology, 68(2), 211.

Zhang Q, et al. (2026) Large language model-assisted research question development in public health: a case study in the Special Supplemental Nutrition Program for Women, Infants, and Children. Public health nutrition, 29(1), e32.

Mou M, et al. (2026) Accurate Identification of Protein Binding Sites for All Drug Modalities Using ALLSites. Advanced science (Weinheim, Baden-Wurttemberg, Germany), 13(10), e16530.