# Roseanne M Ford

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 52 papers | 2,393 citations | 186265<br>28 h-index | 206112<br>48 g-index |
| 57 all docs | 57 docs citations | 57 times ranked | 2655 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | <i>Escherichia coli</i> chemotaxis to competing stimuli in a microfluidic device with a constant gradient. Biotechnology and Bioengineering, 2022, 119, 2564-2573. | 3.3 | 3 |
| 2 | A mathematical model for <i>Escherichia coli</i> chemotaxis to competing stimuli. Biotechnology and Bioengineering, 2021, 118, 4678-4686. | 3.3 | 4 |
| 3 | Transport of chemotactic bacteria in granular media with randomly distributed chemoattractant-containing NAPL ganglia: Modeling and simulation. Advances in Water Resources, 2021, , 104065. | 3.8 | 3 |
| 4 | Chemotaxis in shear flow: Similarity solutions of the steadyâ€state chemoattractant and bacterial distributions. AICHE Journal, 2019, 65, e16713. | 3.6 | 2 |
| 5 | Chemotaxis Increases the Retention of Bacteria in Porous Media with Residual NAPL Entrapment. Environmental Science & Technology, 2018, 52, 7289-7295. | 10.0 | 28 |
| 6 | Preliminary Study on Dimensionless Expression of Bacterial Chemotaxis in Simulated Contaminated System. IOP Conference Series: Earth and Environmental Science, 2018, 178, 012009. | 0.3 | 0 |
| 7 | An engineering design approach to systems biology. Integrative Biology (United Kingdom), 2017, 9, 574-583. | 1.3 | 22 |
| 8 | Modeling Transport of Chemotactic Bacteria in Granular Media with Distributed Contaminant Sources. Environmental Science & Technology, 2017, 51, 14192-14198. | 10.0 | 11 |
| 9 | Enhanced Retention of Chemotactic Bacteria in a Pore Network with Residual NAPL Contamination. Environmental Science & Technology, 2016, 50, 165-172. | 10.0 | 29 |
| 10 | Self-Partitioned Droplet Array on Laser-Patterned Superhydrophilic Glass Surface for Wall-less Cell Arrays. Analytical Chemistry, 2016, 88, 2652-2658. | 6.5 | 30 |
| 11 | Chemotaxis Increases the Residence Time of Bacteria in Granular Media Containing Distributed Contaminant Sources. Environmental Science & Technology, 2016, 50, 181-187. | 10.0 | 43 |
| 12 | Quantitative analysis of chemotaxis towards toluene by <i>Pseudomonas putida</i> in a convectionâ€free microfluidic device. Biotechnology and Bioengineering, 2015, 112, 896-904. | 3.3 | 35 |
| 13 | Bacterial chemotaxis toward a NAPL source within a poreâ€scale microfluidic chamber. Biotechnology and Bioengineering, 2012, 109, 1622-1628. | 3.3 | 29 |
| 14 | Impact of fluorochrome stains used to study bacterial transport in shallow aquifers on motility and chemotaxis of Pseudomonas species. FEMS Microbiology Ecology, 2012, 81, 163-171. | 2.7 | 4 |
| 15 | Idling Time of Motile Bacteria Contributes to Retardation and Dispersion in Sand Porous Medium. Environmental Science & Technology, 2011, 45, 3945-3951. | 10.0 | 27 |
| 16 | Chemotaxis increases vertical migration and apparent transverse dispersion of bacteria in a benchâ€scale microcosm. Biotechnology and Bioengineering, 2011, 108, 2070-2077. | 3.3 | 20 |
| 17 | Quantitative Analysis of Transverse Bacterial Migration Induced by Chemotaxis in a Packed Column with Structured Physical Heterogeneity. Environmental Science & Technology, 2010, 44, 780-786. | 10.0 | 18 |
| 18 | Upscaling microbial chemotaxis in porous media. Advances in Water Resources, 2009, 32, 1413-1428. | 3.8 | 40 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Surface Association of Motile Bacteria at Granular Porous Media Interfaces. Environmental Science & Technology, 2009, 43, 3712-3719. | 10.0 | 7 |
| 20 | Enhanced Transverse Migration of Bacteria by Chemotaxis in a Porous T-Sensor. Environmental Science & Technology, 2009, 43, 1546-1552. | 10.0 | 68 |
| 21 | Idling Time of Swimming Bacteria near Particulate Surfaces Contributes to Apparent Adsorption Coefficients at the Macroscopic Scale under Static Conditions. Environmental Science & Technology, 2009, 43, 8874-8880. | 10.0 | 9 |
| 22 | Surface association of motile bacteria and apparent tortuosity values in packed column experiments. Water Resources Research, 2009, 45, . | 4.2 | 3 |
| 23 | Transverse Bacterial Migration Induced by Chemotaxis in a Packed Column with Structured Physical Heterogeneity. Environmental Science & Technology, 2009, 43, 5921-5927. | 10.0 | 37 |
| 24 | Bacterial chemotaxis transverse to axial flow in a microfluidic channel. Biotechnology and Bioengineering, 2008, 100, 653-663. | 3.3 | 53 |
| 25 | Coupled Effect of Chemotaxis and Growth on Microbial Distributions in Organic-Amended Aquifer Sediments: Observations from Laboratory and Field Studies. Environmental Science & Technology, 2008, 42, 3556-3562. | 10.0 | 28 |
| 26 | Monte Carlo Simulations Derived from Direct Observations of Individual Bacteria Inform Macroscopic Migration Models at Granular Porous Media Interfaces. Environmental Science & Technology, 2007, 41, 6403-6409. | 10.0 | 12 |
| 27 | Role of chemotaxis in the transport of bacteria through saturated porous media. Advances in Water Resources, 2007, 30, 1608-1617. | 3.8 | 132 |
| 28 | Mathematical Modeling of Chemotactic Bacterial Transport through a Two-Dimensional Heterogeneous Porous Medium. Bioremediation Journal, 2006, 10, 13-23. | 2.0 | 16 |
| 29 | Taking the Fungal Highway:Â Mobilization of Pollutant-Degrading Bacteria by Fungi. Environmental Science & Technology, 2005, 39, 4640-4646. | 10.0 | 367 |
| 30 | Analysis of Column Tortuosity for MnCl2and Bacterial Diffusion Using Magnetic Resonance Imaging. Environmental Science & Technology, 2005, 39, 149-154. | 10.0 | 34 |
| 31 | Quantification of Bacterial Chemotaxis in Porous Media Using Magnetic Resonance Imaging. Environmental Science & Technology, 2004, 38, 3864-3870. | 10.0 | 93 |
| 32 | Analysis of Bacterial Random Motility in a Porous Medium Using Magnetic Resonance Imaging and Immunomagnetic Labeling. Environmental Science & Technology, 2003, 37, 781-785. | 10.0 | 55 |
| 33 | Reversal of Flagellar Rotation Is Important in Initial Attachment of Escherichia coli to Glass in a Dynamic System with High- and Low-Ionic-Strength Buffers. Applied and Environmental Microbiology, 2002, 68, 1280-1289. | 3.1 | 75 |
| 34 | Reversible and Irreversible Adhesion of Motile Escherichia coli Cells Analyzed by Total Internal Reflection Aqueous Fluorescence Microscopy. Applied and Environmental Microbiology, 2002, 68, 2794-2801. | 3.1 | 152 |
| 35 | Characterizing the adhesion of motile and nonmotileEscherichia coli to a glass surface using a parallel-plate flow chamber. Biotechnology and Bioengineering, 2002, 78, 179-189. | 3.3 | 89 |
| 36 | Glass micromodel study of bacterial dispersion in spatially periodic porous networks. Biotechnology and Bioengineering, 2002, 78, 556-566. | 3.3 | 38 |

| # | ARTICLE | IF | CITATIONS |
|---|---|---|---|
| 37 | Quantification of random motility and chemotaxis bacterial transport coefficients using individual-cell and population-scale assays. Biotechnology and Bioengineering, 2001, 75, 292-304. | 3.3 | 75 |
| 38 | Temperature-Sensitive Motility of <i>Sulfolobus acidocaldarius</i> Influences Population Distribution in Extreme Environments. Journal of Bacteriology, 1999, 181, 4020-4025. | 2.2 | 35 |
| 39 | Transformations in Flagellar Structure ofRhodobacter sphaeroides and Possible Relationship to Changes in Swimming Speed. Journal of Bacteriology, 1999, 181, 4825-4833. | 2.2 | 58 |
| 40 | Investigation of Nutrient Limitation On Oil Spill Bioremediation Using a 1-D Mathematical Model. International Oil Spill Conference Proceedings, 1999, 1999, 1043-1047. | 0.1 | 0 |
| 41 | Mathematical Models for Motile Bacterial Transport in Cylindrical Tubes. Journal of Theoretical Biology, 1998, 195, 481-504. | 1.7 | 35 |
| 42 | Perturbation Expansion of Alt's Cell Balance Equations Reduces to Segel's One-Dimensional Equations for Shallow Chemoattractant Gradients. SIAM Journal on Applied Mathematics, 1998, 59, 35-57. | 1.8 | 53 |
| 43 | Mathematical model for characterization of bacterial migration through sand cores. Biotechnology and Bioengineering, 1997, 53, 487-496. | 3.3 | 34 |
| 44 | Mathematical model for characterization of bacterial migration through sand cores. , 1997, 53, 487. | | 1 |
| 45 | Numerical Solution of Transport Equations for Bacterial Chemotaxis: Effect of Discretization of Directional Motion. SIAM Journal on Applied Mathematics, 1996, 56, 1639-1663. | 1.8 | 18 |
| 46 | Growth rate effects on fundamental transport properties of bacterial populations. Biotechnology and Bioengineering, 1993, 42, 1277-1286. | 3.3 | 17 |
| 47 | Cellular Dynamics simulations of bacterial chemotaxis. Chemical Engineering Science, 1993, 48, 687-699. | 3.8 | 87 |
| 48 | A simple expression for quantifying bacterial chemotaxis using capillary assay data: application to the analysis of enhanced chemotactic responses from growth-limited cultures. Mathematical Biosciences, 1992, 109, 127-149. | 1.9 | 19 |
| 49 | Analysis of chemotactic bacterial distributions in population migration assays using a mathematical model applicable to steep or shallow attractant gradients. Bulletin of Mathematical Biology, 1991, 53, 721-749. | 1.9 | 57 |
| 50 | Measurement of bacterial random motility and chemotaxis coefficients: I. Stopped-flow diffusion chamber assay. Biotechnology and Bioengineering, 1991, 37, 647-660. | 3.3 | 114 |
| 51 | Measurement of bacterial random motility and chemotaxis coefficients: II. Application of single-cell-based mathematical model. Biotechnology and Bioengineering, 1991, 37, 661-672. | 3.3 | 82 |
| 52 | Stopped-flow chamber and image analysis system for quantitative characterization of bacterial population migration: Motility and chemotaxis ofEscherichia coli K12 to fucose. Microbial Ecology, 1991, 22, 127-138. | 2.8 | 5 |