Andro Mikelic

List of Publications by Year
in descending order

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145 papers	4,540 citations	101384 36 h-index	114278 63 g-index
152 all docs	152 docs citations	152 times ranked	1874 citing authors

#	Article	IF	Citations
1	On The Interface Boundary Condition of Beavers, Joseph, and Saffman. SIAM Journal on Applied Mathematics, 2000, 60, 1111-1127.	0.8	349
2	On the Roughness-Induced Effective Boundary Conditions for an Incompressible Viscous Flow. Journal of Differential Equations, 2001, 170, 96-122.	1.1	240
3	Convergence of iterative coupling for coupled flow and geomechanics. Computational Geosciences, 2013, 17, 455-461.	1.2	203
4	Frictional contact problems with normal compliance. International Journal of Engineering Science, 1988, 26, 811-832.	2.7	188
5	A Phase-Field Method for Propagating Fluid-Filled Fractures Coupled to a Surrounding Porous Medium. Multiscale Modeling and Simulation, 2015, 13, 367-398.	0.6	187
6	On the vanishing viscosity limit for the 2D incompressible Navier-Stokes equations with the friction type boundary conditions. Nonlinearity, 1998, 11, 1625-1636.	0.6	176
7	Phase-field modeling of a fluid-driven fracture in a poroelastic medium. Computational Geosciences, 2015, 19, 1171-1195.	1.2	133
8	Convergence of the Homogenization Process for a Double-Porosity Model of Immiscible Two-Phase Flow. SIAM Journal on Mathematical Analysis, 1996, 27, 1520-1543.	0.9	109
9	A quasi-static phase-field approach to pressurized fractures. Nonlinearity, 2015, 28, 1371-1399.	0.6	101
10	On friction problems with normal compliance. Nonlinear Analysis: Theory, Methods & Applications, 1989, 13, 935-955.	0.6	99
11	Homogenizing the acoustic properties of the seabed: Part I. Nonlinear Analysis: Theory, Methods & Applications, 2000, 40, 185-212.	0.6	98
12	Modeling Viscoelastic Behavior of Arterial Walls and Their Interaction with Pulsatile Blood Flow. SIAM Journal on Applied Mathematics, 2006, 67, 164-193.	0.8	97
13	Asymptotic Analysis of the Laminar Viscous Flow Over a Porous Bed. SIAM Journal of Scientific Computing, 2001, 22, 2006-2028.	1.3	94
14	Rigorous Upscaling of the Reactive Flow through a Pore, under Dominant Peclet and Damkohler Numbers. SIAM Journal on Mathematical Analysis, 2006, 38, 1262-1287.	0.9	86
15	Blood Flow in Compliant Arteries: An Effective Viscoelastic Reduced Model, Numerics, and Experimental Validation. Annals of Biomedical Engineering, 2006, 34, 575-592.	1.3	84
16	Numerical convergence study of iterative coupling for coupled flow and geomechanics. Computational Geosciences, 2014, 18, 325-341.	1.2	82
17	Modeling Effective Interface Laws for Transport Phenomena Between an Unconfined Fluid and a Porous Medium Using Homogenization. Transport in Porous Media, 2009, 78, 489-508.	1.2	76
18	Couette Flows over a Rough Boundary and Drag Reduction. Communications in Mathematical Physics, 2003, 232, 429-455.	1.0	75

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19	A global existence result for the equations describing unsaturated flow in porous media with dynamic capillary pressure. Journal of Differential Equations, 2010, 248, 1561-1577.	1.1	73
20	Homogenizing the acoustic properties of the seabed, part II. Mathematical and Computer Modelling, 2001, 33, 821-841.	2.0	72
21	Phase-field modeling of proppant-filled fractures in a poroelastic medium. Computer Methods in Applied Mechanics and Engineering, 2016, 312, 509-541.	3.4	72
22	Homogenization of nonstationary Navier-Stokes equations in a domain with a grained boundary. Annali Di Matematica Pura Ed Applicata, 1991, 158, 167-179.	0.5	68
23	Effective Equations Modeling the Flow of a Viscous Incompressible Fluid through a Long Elastic Tube Arising in the Study of Blood Flow through Small Arteries. SIAM Journal on Applied Dynamical Systems, 2003, 2, 431-463.	0.7	67
24	Reactive transport through an array of cells with semi-permeable membranes. ESAIM: Mathematical Modelling and Numerical Analysis, 1994, 28, 59-94.	0.8	65
25	Effective Equations for Two-Phase Flow with Trapping on the Micro Scale. SIAM Journal on Applied Mathematics, 2002, 62, 1531-1568.	0.8	57
26	The derivation of a nonlinear filtration law including the inertia effects via homogenization. Nonlinear Analysis: Theory, Methods & Applications, 2000, 42, 97-137.	0.6	51
27	Two-scale expansion with drift approach to the Taylor dispersion for reactive transport through porous media. Chemical Engineering Science, 2010, 65, 2292-2300.	1.9	48
28	Self-Consistent Effective Equations Modeling Blood Flow in Medium-to-Large Compliant Arteries. Multiscale Modeling and Simulation, 2005, 3, 559-596.	0.6	46
29	Phase-Field Modeling of Two Phase Fluid Filled Fractures in a Poroelastic Medium. Multiscale Modeling and Simulation, 2018, 16, 1542-1580.	0.6	44
30	Polynomial Filtration Laws for Low Reynolds Number Flows Through Porous Media. Transport in Porous Media, 2010, 81, 35-60.	1.2	43
31	Homogenization of a polymer flow through a porous medium. Nonlinear Analysis: Theory, Methods & Applications, 1996, 26, 1221-1253.	0.6	41
32	On the stochastic Cahn-Hilliard equation. Nonlinear Analysis: Theory, Methods & Applications, 1991, 16, 1169-1200.	0.6	39
33	Homogenizing the acoustic properties of a porous matrix containing an incompressible inviscid fluid. Mathematical Methods in the Applied Sciences, 2003, 26, 831-859.	1.2	39
34	Homogenization Approach to the Dispersion Theory for Reactive Transport through Porous Media. SIAM Journal on Mathematical Analysis, 2010, 42, 125-144.	0.9	39
35	Chapter 1 Effective Dispersion Equations for Reactive Flows with Dominant PÃ©clet and Damkohler Numbers. Advances in Chemical Engineering, 2008, 34, 1-45.	0.5	38
36	ON THE INTERFACE LAW BETWEEN A DEFORMABLE POROUS MEDIUM CONTAINING A VISCOUS FLUID AND AN ELASTIC BODY. Mathematical Models and Methods in Applied Sciences, 2012, 22, .	1.7	38

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37	Pressure jump interface law for the Stokesâ€"Darcy coupling: confirmation by direct numerical simulations. Journal of Fluid Mechanics, 2013, 732, 510-536.	1.4	37
38	Homogenization of the linearized ionic transport equations in rigid periodic porous media. Journal of Mathematical Physics, 2010, 51, .	0.5	36
39	Fluid-structure interaction in a pre-stressed tube with thick elastic walls I: the stationary Stokes problem. Networks and Heterogeneous Media, 2007, 2, 397-423.	0.5	32
40	Phase-field modeling through iterative splitting of hydraulic fractures in a poroelastic medium. GEM - International Journal on Geomathematics, 2019, 10, 1.	0.7	32
41	Effective Pressure Interface Law for Transport Phenomena between an Unconfined Fluid and a Porous Medium Using Homogenization. Multiscale Modeling and Simulation, 2012, 10, 285-305.	0.6	31
42	Ion transport in porous media: derivation of the macroscopic equations using upscaling and properties of the effective coefficients. Computational Geosciences, 2013, 17, 479-495.	1.2	31
43	Effective interface conditions for the forced infiltration of a viscous fluid into a porous medium using homogenization. Computer Methods in Applied Mechanics and Engineering, 2015, 292, 195-220.	3.4	31
44	Analytical and variational numerical methods for unstable miscible displacement flows in porous media. Journal of Computational Physics, 2017, 335, 444-496.	1.9	31
45	On Upscaling Certain Flows in Deformable Porous Media. Multiscale Modeling and Simulation, 2008, 7, 93-123.	0.6	30
46	Effective laws for the Poisson equation on domains with curved oscillating boundaries. Applicable Analysis, 2006, 85, 479-502.	0.6	28
47	STATIONARY SOLUTIONS TO A QUASI-NEWTONIAN FLOW WITH VISCOUS HEATING. Mathematical Models and Methods in Applied Sciences, 1995, 05, 725-738.	1.7	27
48	A Global Existence Result for the Quasistatic Frictional Contact Problem with Normal Compliance. , 1991, , 85-111.		24
49	Effective equations of two-phase flow in random media. Calculus of Variations and Partial Differential Equations, 1995, 3, 385-406.	0.9	22
50	Homogenization of the inviscid incompressible fluid flow through a 2D porous medium. Proceedings of the American Mathematical Society, 1999, 127, 2019-2028.	0.4	22
51	Homogenization theory and applications to filtration through porous media. Lecture Notes in Mathematics, 2000, , 127-214.	0.1	22
52	Theory of the dynamic Biot-Allard equations and their link to the quasi-static Biot system. Journal of Mathematical Physics, 2012, 53, .	0.5	22
53	A Rigorous Derivation of the Equations for the Clamped Biot-Kirchhoff-Love Poroelastic Plate. Archive for Rational Mechanics and Analysis, 2015, 215, 1035-1062.	1.1	21
54	A two-dimensional effective model describing fluidâ€"structure interaction in blood flow: analysis, simulation and experimental validation. Comptes Rendus - Mecanique, 2005, 333, 867-883.	2.1	20

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55	Mathematical derivation of the power law describing polymer flow through a thin slab. ESAIM: Mathematical Modelling and Numerical Analysis, 1995, 29, 3-21.	0.8	19
56	On the effective equations of a viscous incompressible fluid flow through a filter of finite thickness. Communications on Pure and Applied Mathematics, 1998, 51, 1073-1121.	1.2	19
57	Mathematical theory of stationary miscible filtration. Journal of Differential Equations, 1991, 90, 186-202.	1.1	18
58	WEAK NONLINEAR CORRECTIONS FOR DARCYâ€™S LAW. Mathematical Models and Methods in Applied Sciences, 1996, 06, 1143-1155.	1.7	18
59	One-Dimensional Thermoelastic Contact with a Stress-Dependent Radiation Condition. SIAM Journal on Mathematical Analysis, 1992, 23, 1393-1416.	0.9	16
60	Homogenization Limit of a Model System for Interaction of Flow, Chemical Reactions, and Mechanics in Cell Tissues. SIAM Journal on Mathematical Analysis, 2011, 43, 1390-1435.	0.9	16
61	The rigid punch problem with friction. International Journal of Engineering Science, 1991, 29, 751-768.	2.7	15
62	ModÃ¨le de double porositÃ© alÃ©atoire. Comptes Rendus Mathematique, 1998, 327, 99-104.	0.5	15
63	Rigorous upscaling of the infinite adsorption rate reactive flow under dominant Peclet number through a pore. Annali Dell'Universita Di Ferrara, 2007, 53, 333-359.	0.7	15
64	An existence result for the equations describing a gasâ€“liquid two-phase flow. Comptes Rendus - Mecanique, 2009, 337, 226-232.	2.1	15
65	Role of non-ideality for the ion transport in porous media: Derivation of the macroscopic equations using upscaling. Physica D: Nonlinear Phenomena, 2014, 282, 39-60.	1.3	15
66	Effective fluid flow in a porous medium containing a thin fissure. Asymptotic Analysis, 1995, 11, 241-262.	0.2	14
67	Title is missing!. Annals of Software Engineering, 1997, 1, 59-83.	0.5	14
68	Laplace transform approach to the rigorous upscaling of the infinite adsorption rate reactive flow under dominant Peclet number through a pore. Applicable Analysis, 2008, 87, 1373-1395.	0.6	14
69	Rigorous upscaling of the reactive flow with finite kinetics and under dominant PÃ©clet number. Continuum Mechanics and Thermodynamics, 2009, 21, 125-140.	1.4	14
70	Renormalization group secondâ€order approximation for singularly perturbed nonlinear ordinary differential equations. Mathematical Methods in the Applied Sciences, 2018, 41, 5691-5710.	1.2	14
71	A monolithic phase-field model of a fluid-driven fracture in a nonlinear poroelastic medium. Mathematics and Mechanics of Solids, 2019, 24, 1530-1555.	1.5	14
72	On the stationary quasi-Newtonian flow obeying a power-law. Mathematical Methods in the Applied Sciences, 1995, 18, 927-948.	1.2	13

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73	Effective slip law for general viscous flows over an oscillating surface. Mathematical Methods in the Applied Sciences, 2013, 36, 2086-2100.	1.2	13
74	Asymptotic analysis of the Poissonâ€"Boltzmann equation describing electrokinetics in porous media. Nonlinearity, 2013, 26, 881-910.	0.6	12
75	Effective pressure boundary condition for the filtration through porous medium via homogenization. Nonlinear Analysis: Real World Applications, 2018, 44, 149-172.	0.9	12
76	Homogenization approach to the upscaling of a reactive flow through particulate filters with wall integrated catalyst. Advances in Water Resources, 2020, 146, 103779.	1.7	12
77	On the Equations Describing a Relaxation Toward a Statistical Equilibrium State in the Two-Dimensional Perfect Fluid Dynamics. SIAM Journal on Mathematical Analysis, 1998, 29, 1238-1255.	0.9	11
78	ON THE EQUATIONS GOVERNING THE FLOW OF MECHANICALLY INCOMPRESSIBLE, BUT THERMALLY EXPANSIBLE, VISCOUS FLUIDS. Mathematical Models and Methods in Applied Sciences, 2008, 18, 813-857.	1.7	11
79	Analysis of Model Equations for Stress-Enhanced Diffusion in Coal Layers. Part I: Existence of a Weak Solution. SIAM Journal on Mathematical Analysis, 2008, 40, 1671-1691.	0.9	11
80	A positivity-preserving ALE finite element scheme for convectionâ€"diffusion equations in moving domains. Journal of Computational Physics, 2011, 230, 2896-2914.	1.9	11
81	A convergence theorem for homogenization of two-phase miscible flow through fractured reservoirs with uniform fracture distributions. Applicable Analysis, 1989, 33, 203-214.	0.6	10
82	Thermoporoelasticity via homogenization: Modeling and formal two-scale expansions. International Journal of Engineering Science, 2019, 138, 1-25.	2.7	10
83	Homogenization of an elastic material with inclusions in frictionless contact. Mathematical and Computer Modelling, 1998, 28, 287-307.	2.0	9
84	Homogenization of Stationary Flow of Miscible Fluids in a Domain with a Grained Boundary. SIAM Journal on Mathematical Analysis, 1988, 19, 287-294.	0.9	8
85	Remark on the result on homogenization in hydrodynamical lubrication by G. Bayada and M. Chambat. ESAIM: Mathematical Modelling and Numerical Analysis, 1991, 25, 363-370.	0.8	8
86	Homogenization of two-phase immiscible flows in a one-dimensional porous medium. Asymptotic Analysis, 1994, 9, 359-380.	0.2	8
87	Effective equations describing the flow of a viscous incompressible fluid through a long elastic tube. Comptes Rendus - Mecanique, 2002, 330, 661-666.	2.1	8
88	Title is missing!. Computational Geosciences, 2003, 7, 183-196.	1.2	8
89	Analysis of Differential Equations Modelling the Reactive Flow through a Deformable System of Cells. Archive for Rational Mechanics and Analysis, 2009, 192, 331-374.	1.1	8
90	RIGOROUS DERIVATION OF A HYPERBOLIC MODEL FOR TAYLOR DISPERSION. Mathematical Models and Methods in Applied Sciences, 2011, 21, 1095-1120.	1.7	8

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91	Derivation of a Poroelastic Flexural Shell Model. Multiscale Modeling and Simulation, 2016, 14, 364-397.	0.6	8
92	Shadow Limit Using Renormalization Group Method and Center Manifold Method. Vietnam Journal of Mathematics, 2017, 45, 103-125.	0.4	8
93	Ion transport through deformable porous media: derivation of the macroscopic equations using upscaling. Computational and Applied Mathematics, 2017, 36, 1431-1462.	1.3	8
94	Constrained kriging using quadratic programming. Journal of the International Association for Mathematical Geology, 1984, 16, 423-429.	0.7	7
95	Modeling solute transport through unsaturated porous media using homogenization I. Computational and Applied Mathematics, 2004, 23, .	1.3	7
96	Homogenization approach to filtration through a fibrous medium. Networks and Heterogeneous Media, 2007, 2, 529-550.	0.5	7
97	Duality applied to contact problems with friction. Applied Mathematics and Optimization, 1990, 22, 211-226.	0.8	6
98	Letter to the Editor: Comments on â€˜About the Beavers and Joseph Boundary Conditionâ€™, DOI:10.1007/s11242-009-9435-9. Transport in Porous Media, 2010, 83, 267-268.	1.2	6
99	The potential integral for a polynomial distribution over a curved triangular domain. International Journal for Numerical Methods in Engineering, 1986, 23, 2277-2285.	1.5	5
100	Existence for the Cahn-Hilliard phase separation model with a nondifferentiable energy. Annali Di Matematica Pura Ed Applicata, 1991, 158, 181-203.	0.5	5
101	On the filtration through porous media with partially soluble permeable grains. Nonlinear Differential Equations and Applications, 2000, 7, 91-105.	0.4	5
102	The 3D flow of a liquid through a porous medium with absorbing and swelling granules. Interfaces and Free Boundaries, 2002, 4, 239-261.	0.2	5
103	MODELING AND HOMOGENIZING A PROBLEM OF ABSORPTION/DESORPTION IN POROUS MEDIA. Mathematical Models and Methods in Applied Sciences, 2006, 16, 1751-1781.	1.7	5
104	Asymptotic equations for the terminal phase of glass fiber drawing and their analysis. Nonlinear Analysis: Real World Applications, 2010, 11, 4533-4545.	0.9	5
105	Non-Newtonian Fluid Mechanics and Complex Flows. Lecture Notes in Mathematics, 2018, , .	0.1	5
106	Identification of mobilities for the Buckley-Leverett equation. Inverse Problems, 1990, 6, 767-787.	1.0	4
107	Homogenization of the heat equation for a domain with a network of pipes with a well-mixed fluid. Annali Di Matematica Pura Ed Applicata, 1994, 166, 227-251.	0.5	4
108	Title is missing!. Annals of Software Engineering, 2000, 4, 99-101.	0.5	4

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109	A diffusion-consumption problem for oxygen in a living tissue perfused by capillaries. Nonlinear Differential Equations and Applications, 2006, 13, 349-367.	0.4	4
110	Experimental and numerical study of the interaction between fluid flow and filtering media on the macroscopic scale. Separation and Purification Technology, 2015, 156, 22-27.	3.9	4
111	Effective equations of two-phase flow in random media. Calculus of Variations and Partial Differential Equations, 1995, 3, 385-406.	0.9	4
112	On the Potential Flow of an Ideal Incompressible Fluid through a Porous Boundary. IMA Journal of Applied Mathematics, 1991, 47, 109-125.	0.8	3
113	Homogenization of nonstationary flow of a two-constituant mixture through a porous medium. Asymptotic Analysis, 1992, 6, 173-189.	0.2	3
114	On the justification of the Reynolds equation, describing isentropic compressible flows through a tiny pore. Annali Dell'Universita Di Ferrara, 2007, 53, 95.	0.7	3
115	Derivation of a poroelastic elliptic membrane shell model. Applicable Analysis, 2019, 98, 136-161.	0.6	3
116	On the effective equations of a viscous incompressible fluid flow through a filter of finite thickness. , 1998, 51, 1073.		3
117	Recent Developments in Multiscale Problems Coming from Fluid Mechanics. , 2003, , 225-267.		3
118	Collective field treatment of confined fermions and bosons in the large-N approximation. Physics Letters, Section A: General, Atomic and Solid State Physics, 1984, 101, 376-378.	0.9	2
119	Constrained anisotropic elastic materials in unilateral contact with or without friction. Nonlinear Analysis: Theory, Methods & Applications, 1991, 16, 155-181.	0.6	2
120	Optimal shape design in contact problems with normal compliance and friction. Applied Mathematics Letters, 1992, 5, 51-55.	1.5	2
121	Fluid injection model without surface tension for resins in thin molds. Journal of Computational and Applied Mathematics, 2004, 164-165, 517-528.	1.1	2
122	Isothermal water flows in low porosity porous media in presence of vaporâ€“liquid phase change. Nonlinear Analysis: Real World Applications, 2014, 15, 306-325.	0.9	2
123	An Introduction to the Homogenization Modeling of Non-Newtonian and Electrokinetic Flows in Porous Media. Lecture Notes in Mathematics, 2018, , 171-227.	0.1	2
124	Mathematical theory and simulations of thermoporoelasticity. Computer Methods in Applied Mechanics and Engineering, 2020, 366, 113048.	3.4	2
125	HOMOGENIZATION OF THE LAPLACE EQUATION IN A PARTIALLY PERFORATED DOMAIN. Series on Advances in Mathematics for Applied Sciences, 1999, , 259-284.	0.0	2
126	Ã‰coulement tangentiel sur une surface rugueuse et loi de Navier. Annales Mathematiques Blaise Pascal, 2002, 9, 313-327.	0.2	2

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127	Stationary Incompressible Viscous Fluid Flow through a Porous Boundary. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 1987, 67, 273-275.	0.9	1
128	Regularity and Uniqueness Results for Two-Phase Miscible Flows in Porous Media. , 1993, , 139-154.		1
129	Blood flow through axially symmetric sections of compliant vessels: new effective closed models. , 2004, 2004, 3696-9.		1
130	Global-in-time solutions for the isothermal Matovichâ€"Pearson equations. Nonlinearity, 2011, 24, 277-292.	0.6	1
131	Long-time shadow limit for a reactionâ€"diffusion-ODE system. Applied Mathematics Letters, 2021, 112, 106790.	1.5	1
132	Mathematical Proof of the Mandel--Cryer Effect in Poroelasticity. Multiscale Modeling and Simulation, 2021, 19, 550-567.	0.6	1
133	On the Boundary Conditions at the Contact Interface between Two Porous Media. , 2018, , 175-186.		1
134	Shadow limit for parabolic-ODE systems through a cut-off argument. Rad Hrvatske Akademije Znanosti I Umjetnosti, Matematicke Znanosti, 2017, 56, 99-116.	0.4	1
135	A nonlinear effective slip interface law for transport phenomena between a fracture flow and a porous medium. Discrete and Continuous Dynamical Systems - Series S, 2014, 7, 1065-1077.	0.6	1
136	Non-Isothermal Flow of Molten Glass: Mathematical Challenges and Industrial Questions. Lecture Notes in Mathematics, 2011, , 173-224.	0.1	1
137	Mandel's problem as a benchmark for two-dimensional nonlinear poroelasticity. Applicable Analysis, 2022, 101, 4267-4293.	0.6	1
138	Solution of a relativistic quasipotential wave equation for a two-body bound state. Physical Review C, 1980, 22, 878-883.	1.1	0
139	Minimization of the energy functional of a oneâ€dimensional fermionic system in the largeâ€N limit. Journal of Mathematical Physics, 1985, 26, 698-704.	0.5	0
140	Mathematical Problems of Statistical Hydromechanics (M. J. Vishik and A. V. Fursikov). SIAM Review, 1989, 31, 704-706.	4.2	0
141	A Hyperbolic Model for Taylorâ€™s Dispersion. , 2009, , .		0
142	Special issue â€œMathematics of Porous Media,â€•dedicated to Professor C.J. van Duijn on the occasion of his 60th anniversary. Computational Geosciences, 2013, 17, 443-445.	1.2	0
143	BLOOD PERFUSION IN MUSCLES: FROM MICROSCOPIC MODELS TO CONTINUUM APPROACH VIA HOMOGENIZATION. , 2004, , .		0
144	Approximation de la lubrification pour lâ€™Ã©talement de gouttes en prÃ©sence dâ€™Ã©vaporation, application aux biopuces. Houille Blanche, 2006, 92, 93-99.	0.3	0

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145	Non-linear boundary condition for non-ideal electrokinetic equations in porous media. Applicable Analysis, 0, , 1-32.	0.6	0