

Steve Greenbaum

PUBLICATIONS

1. "¹⁴N NQR Study of Substituted Anilines and Prediction of *in vitro* Activity of Sulfanilamides" with S.N. Subbarao, P.J. Bray, and T. Oja, *Organic Magnetic Resonance* 14, 379 (1980).
2. "¹⁴N Nuclear Quadrupole Resonance in Carcinostatic Phosphamides", with P.J. Bray, *Physics Letters* 75A, 438 (1980).
3. "¹⁴N Nuclear Quadrupole Resonance in N-Acetyl Amino Acids", with G.F. Sadiq and P.J. Bray, *Organic Magnetic Resonance* 17, 191 (1981).
4. "¹⁴N Nuclear Quadrupole Resonance in Weakly Paramagnetic Organic Dye Cations", with P.J. Bray, *Journal of Magnetic Resonance* 44, 189 (1981).
5. "Pulsed NQR Studies of Electron Distributions in Organic Molecules", with P.J. Bray, *Journal of Molecular Structure* 83, 35 (1982).
6. "¹⁴N NQR in Substituted Isatin Compounds" with R. Mulkern and P.J. Bray, *Magnetic Resonance in Chemistry* 23, 801 (1985).
7. "The Coordination of Boron in a-Si: (B,H)", with W.E. Carlos and P.C. Taylor, *Solid State Communications* 43, 663 (1982).
8. "Boron and Hydrogen Bonding in a-Si: (B,H)" with W.E. Carlos and P.C. Taylor, *Physica* 117+118B+C, 866 (1983).
9. "NMR Study of Low-Energy Excitations in Na \exists -Alumina", with U. Strom and M. Rubinstein, *Physical Review* B26, 5226 (1982).
10. "Low Temperature Nuclear Spin Relaxation in \exists -Aluminas", with U. Strom, *Solid State Communications* 46 437 (1982).
11. "ESR Study of the Diacetylene Polymer 4BCMU", with J.A. Freitas, *Journal of Polymer Science-Physics Edition* 21, 2045 (1983).
12. "NMR Studies of Fluoride and Fast Ion Conducting Glasses", with P.J. Bray, D.E. Hintenlang, R.B. Mulkern, D.C. Tran, M. Drexhage, *Journal of Non-Crystalline Solids* 56, 27 (1983).
13. "Deuteron Magnetic Resonance in (CD)_x", with L. Mattix, H.A. Resing, D.C. Weber. *Physics Letters* 98A, 299 (1983).
14. "Structure and Bonding in the Mixed Chalcogenide System As₂S_xSe_{3-x}", with D.J. Treacy, U. Strom, *Journal of Non-Crystalline Solids* 59 and 60, 847, (1983).
15. "EPR Spectroscopy of Fast Neutron Generated Defects in GaAs" with A. Goltzene, B. Meyer, C.Schwab, R.J. Wagner, T.A. Kennedy, *Journal of Applied Physics*, 56, 3394 (1984).
16. "Bonding Arrangements of Boron in Doped Hydrogenated Amorphous Silicon", with W.E. Carlos, P.C. Taylor, *Journal of Applied Physics* 56, 1874 (1984).
17. "Identification of As_{Ga} Antisite Defects in LEC Czochralski GaAs", with K. Elliot, R.T. Chen, R.J. Wagner, *Applied Physics Letters* 44, 907 (1984).
18. "Local Order and Defects in MBE-Grown a-GaAs", with D.J. Treacy, J. Comas, S.G. Bishop and B. V.

- Shanabrook, *Journal of Non-Crystalline Solids* 66, 133 (1984).
19. "Ionic and Molecular Motion in a Superionic Sodium Poly (ethylene Oxide) Complex" *Solid State Ionics* 15, 259 (1985).
 20. "Electrically Conducting Poly(vinyl acetate)" with M.C. Wintersgill, J.J. Fontanella, J.P. Calame, C.G. Andeen, *Journal of the Electrochemical Society* 131 2208 (1984).
 21. "Modeling of Fast Neutron-Induced Defects in GaAs", with A. Goltzene, B. Meyer, C.Schwab, R.J. Wagner, Proceeding of 11th International Symposium on Gallium Arsenide and Related Compounds, Biarritz, France, Sept. 1984.
 22. "NMR, Electrical Relaxation, and High Pressure Conductivity in Ion Conducting Polymers," with J.J. Fontanella, in Relaxations in Complex Systems, K.L. Ngai, G.B. Wright, eds., Office of Naval Research, 1985, p.211.
 23. "Structural and Chemical Disorder in a-GaAs" with D.J. Treacy, J. Comas, S.G. Bishop and B.V. Shanabrook, Proceeding of 17th International Conference on the Physics of Semiconductors, San Francisco (1984), Springer Verlag, New York, 1985, p.821.
 24. "Conductivity, DSC, FTIR, and NMR Study of Poly(vinyl Acetate) Complexed with Alkali Metal Salts," with M.C. Wintersgill, J.J. Fontanella, J.P. Calame, M.K. Smith, T.H. Jones, K.J. Adamic, A.N. Shetty, C.G. Andeen, *Solid State Ionics* 18 & 19 , 326 (1985).
 25. "Short-Range Bonding Arrangements in Amorphous III-V Compounds", with R.A. Marino, K.J. Adamic, *Journal of Non-Crystalline Solids* 77&78, 1285 (1985).
 26. "Ionic Conductivity in Solid, Crosslinked Dimethylsiloxane-Ethylene Oxide Copolymer Networks Containing Sodium", with K.J. Adamic, M.C. Wintersgill, J.J. Fontanella, *Journal of Applied Physics* 60, 1342 (1986).
 27. "NMR, DSC, TMA, and High Pressure Electrical Conductivity in Solid State, Crosslinked Dimethylsiloxane-Ethylene Oxide Copolymer Networks Containing Sodium", with M.C. Wintersgill, J.J. Fontanella, M.K. Smith, K.J. Adamic, C.G. Andeen, *Polymer* 28 633 (1987).
 28. "DR, NMR, and High Pressure Electrical Conductivity in PPO Complexed with Sodium Salts" with M.C. Wintersgill, J.J. Fontanella, M.K. Smith, Y.S. Pak, C.G. Andeen, *Journal of the Electrochemical Society*, 135 235 (1988).
 29. "DSC, Electrical Conductivity, and NMR Studies of Salt Precipitation Effects in PPO Complexes", with M.C. Wintersgill, J.J. Fontanella and K.J. Adamic, *British Polymer Journal*, 20, 195 (1988).
 30. "Amorphous Phase Separation, Salt Precipitation, and High Pressure Effects in PPO Containing NaI", with K.J. Adamic, M.C. Wintersgill, J.J. Fontanella, and C.G. Andeen, in proceedings of the Electrochemical Society Symposium on Electro-Ceramics and Solid State Ionics, ed. H.Tuller, Pennington, NJ 1988.
 31. "NMR, DSC, and Electrical Conductivity Studies of MEEP Complexed with NaCF₃SO₃", with K.J. Adamic, Y.S. Pak, M.C. Wintersgill, and J.J. Fontanella, *Solid State Ionics*, 28-30, 1042 (1988).
 32. "High Pressure Conductivity and NMR Investigation of Siloxane-Based Polymer Electrolytes", with Y.S. Pak, K.J. Adamic, M.C. Wintersgill, J.J. Fontanella, H.L. Mei and Y. Okamoto, *Molecular Crystals and Liquid Crystals*, 160, 347-357 (1988).
 33. "Iodine L-Edge x-Ray Absorption Fine Structure Studies of Polymer-Iodide Salt Complexes", with M.L. denBoer, *Molecular Crystals and Liquid Crystals*, 160, 339-345 (1988)

34. "NMR Studies of Na⁺ - anion Association Effects in Polymer Electrolytes", with Y.S. Pak, M.C. Wintersgill, and J.J. Fontanella, *Solid State Ionics*, 31, 241 (1988).
35. "Electrical Conductivity, Dielectric Relaxation, DSC, and NMR Studies of Amorphous Poly (ethylene oxide) complexed with Alkali Metal Salts" with a. Al-Murdaris, A.V. Chadwick, M.C. Wintersgill and J.J. Fontanella, *Polymer*, 30 1123 (1989).
36. "¹³C NMR Studies of Poly (propylene oxide) Complexed with Alkali Iodides", with R.E. Stark and Y.S. Pak, *Solid State Ionics* 34, 275 (1989).
37. "Polymer Electrolytes with Exclusive Cationic Conductivity", with H. Liu, Y. Okamoto, Y.S. Pak, K.J. Adamic, Materials Research Society Symposium on *Solid State Ionics*, 135, 343 (1989).
38. "²⁷Al NMR Study of Mixed Alkali Effects in γ -Alumina", with D. E. Hintenlang, E.J. Holupka, and P.J. Bray, *Solid State Ionics*, 34, 207 (1989).
39. "Dielectric Relaxation and Deuteron NMR of Water in Polyimide Films", with G. Xu, C.C. Gryte, A.S. Nowick, S.Z. Li, and Y.S. Pak, *Journal of Applied Physics*, 66 5290 (1989).
40. "ESR Studies of Divalent Copper in Polymer Electrolytes", with K.J. Adamic, F.J. Owens, M.C. Wintersgill and J.J. Fontanella, in Proceedings of the Second International Symposium on Polymer Electrolytes, B. Scrosati, ed., Elsevier Applied Science, New York (1990), p.61.
41. "Dielectric Relaxation Studies of Polymer Electrolytes", with J.J. Wilson, M.C. Wintersgill and J.J. Fontanella, *Ibid*, p 35.
42. "X-Ray Fluorescence and Reflectivity of PS/PBRS Interfaces" with J. Sokolov, X. Zhao, M.H. Rafailovich, J.M Bloch, R.J. Composto, T. Mansfield, R.S. Stein, N.L. Yang, R.A. L. Jones, E.J. Kramer and M. Sansone, *Polymer Preprints* 31, 79 (1990).
43. "⁷Li NMR Study of Polymer Electrolytes Based on Composites of MEEP and PEO", with K.J. Adamic, K.M. Abraham, M. Alamgir, M.C. Wintersgill and J.J. Fontanella, *Chemistry of Materials*, 3, 534 (1991).
44. "ESR Investigation of Copper Ion Mobility in PEO: Cu(CF₃SO₃)₂ Complexes" with K.J. Adamic, S. Panero, P. Prospero and B. Scrosati, Materials Research Society Symposium Proceedings 210 (Solid State Ionics II), 1991, p.249.
45. "NMR Studies of Polymer Electrolytes" with Y.S. Pak, K.J. Adamic, M.C. Wintersgill, and J.J. Fontanella, *ibid*. p.237.
46. "Complex Impedance and Multifrequency ²³Na NMR Study of Poly(propylene oxide) Complexed with NaB(Ph)₄", with Y.S. Pak, K.J. Adamic, J.J. Fontanella and M.C. Wintersgill, *Solid State Ionics*, 45, 277 (1991).
47. "Application of the Bendler-Shlesinger Generalization of the Vogel Equation to Ion Conducting Polymers", with J.J. Fontanella, M.C. Wintersgill and P. Mazaud, *Journal of Polymer Science, part B: Polymer Physics* 29, 747 (1991).
48. "Impedance and ²H NMR Studies of Stoichiometric Alkaline Hydroxide Hydrates", with Z. Borkowska, U. Frese, L. Kriegsmann, U. Stimming, M. Gavish and K.J. Adamic, *Berichte Der Bunsengesellschaft - Physical Chemistry*, 95, 1033–1036 (1991).
49. "Electrical Relaxation in Poly(propylene oxide) With and Without Alkali Metal Salts", with J.J. Fontanella, J.J. Wilson, M.K. Smith, M.C. Wintersgill, C.S. Coughlin, P. Mazaud and R.L. Siddon, *Solid State Ionics* 50, 259 (1992).

50. "Disorder in \exists -aluminas: Dielectric Relaxation and X-ray Absorption," with M.L. denBoer, Y.S. Pak, K.J. Adamic, M.C. Wintersgill, J.F. Lomax, J.J. Fontanella, B. Dunn and G.C. Farrington, *Physical Review B* 45, 6369 (1992).
51. "Diffusion and Deuteron NMR Study of the Distribution of Water Molecules in Polyimide Films", with S.Z. Li, Y.S. Pak, A.S. Nowick, H. Lim, *Journal of the Electrochemical Society* 139, 662 (1992).
52. "Electrochemical Insertion of Lithium into the High T_c Superconductor $\text{Bi}_2\text{CaSr}_2\text{Cu}_2\text{O}_{8+y}$ ", with N. Fleischer, J. Manassen, P. Lee, Y. Gao and P. Coppens, *Physica C* 190, 367 (1992).
53. "Ionic Conductivity and ^7Li NMR Study of Poly(ethylene glycol) Complexed With Lithium Salts", with S. Panero and B. Scrosati, *Electrochimica Acta* 37, 1533 (1992).
54. "Studies of Water in NAFION Membranes, Using Deuteron and Oxygen-17 Nuclear Magnetic Resonance and Dielectric Relaxation Techniques", with R. Chen, J. Jayakody, Y.S. Pak, G. Xu, J. J. Fontanella and M.C. Wintersgill, *Journal of the Electrochemical Society* 140, 889 (1993).
55. "NMR Studies of Ion Mobility and Association in Polyether-based Polymer Electrolytes", *Polymers for Advanced Technology: Special Issue on Ion Conductive Polymers* 4, 172 (1993).
56. "High Pressure Studies of Hydrated NAFION Membranes: Dielectric Relaxation and Deuteron NMR", with M.G. McLin, M.C. Wintersgill, J.J. Fontanella, J.P. Jayakody and R.S. Chen, *Solid State Ionics* 60, 137 (1993).
57. "Synthesis and Properties of Cation-conducting High Temperature Polymer Electrolytes", with Y. Okamoto, Z.S. Xu, Y.S. Pak, M.G. McLin, and J.J. Fontanella, *Solid State Ionics* 60, 131 (1993).
58. "Deuteron and Oxygen-17 NMR Studies of Molecular Motion in Methanol-Saturated *Nafion* Membranes", with R.S. Chen and J.R.P. Jayakody, Materials Research Society Symposium on Solid State Ionics **III**, MRS Proceedings vol.293 (1993), p.99.
59. "Deuterium and Carbon-13 NMR of the Solid and Discotic Phases of the Three Benzene Hexa-n-Alkanoates", with A. Maliniak, R. Puopko, H. Zimmermann and Z. Luz, *Journal of Physical Chemistry* 97, 4832 (1993).
60. " ^7Li NMR and Ionic Conductivity Studies of Gel Electrolytes Based on Poly(acrylonitrile)", with F. Croce, S.D. Brown, S. Slane and M. Salomon, *Chemistry of Materials* 5, 1268 (1993).
61. "Electrical Impedance Studies of Acid Form NAFION Membranes", with J.J. Fontanella, M.G. McLin, M.C. Wintersgill and J.P. Calame, *Solid State Ionics* 66, 1 (1993).
62. "Complex Impedance, DSC and Lithium-7 NMR Studies of Poly(propylene oxide) Complexed with $\text{LiN}(\text{SO}_2\text{CF}_3)_2$ and with LiAsF_6 ", with S.D. Brown, M.G. McLin, M.C. Wintersgill and J.J. Fontanella, *Solid State Ionics* 67, 257 (1994).
63. "NMR Studies of Water in Rock and Artificial Porous Media: Effects of Hydrostatic Pressure, with R.S. Chen, P.E. Stallworth and R. L. Kleinberg, *Journal of Magnetic Resonance, Series A* 110, 77 (1994).
64. "Sodium-23 NMR and Complex Impedance Studies of Gel Electrolytes Based on Poly(acrylonitrile)", with P.E. Stallworth, J. Li, S. Slane, M. Salomon and F. Croce, *Solid State Ionics* 73, 119 (1995).
65. "High Pressure NMR and Electrical Conductivity Studies in Acid Form NAFION Membranes, with R.S. Chen, P.E. Stallworth, J.J. Fontanella and M.C. Wintersgill, *Electrochimica Acta* 40, 309 (1995).
66. "NMR Studies of Water in Polyimide Films", with S.Z. Li and R.S. Chen, *Journal of Polymer Science, part B, Polymer Physics* 33, 403 (1995).

67. "Lithium-7 NMR and Ionic Conductivity Studies of Gel Electrolytes Based on Poly(methylmethacrylate)", with P.E. Stallworth, F. Croce, S. Slane and M. Salomon, *Electrochimica Acta* 40, 2137 (1995).
68. "Charge Transport and Water Molecular Motion in Variable Molecular Weight NAFION Membranes: High Pressure Electrical Conductivity and NMR", *Electrochimica Acta* 40, 2321 (1995).
69. "Lithium-7 NMR and X-ray absorption studies of $\text{Li}_{1-x}\text{CoO}_2$ Battery Cathodes", with B. Ouyang, S. Kostov, M. denBoer, S. Slane and H.W. Lin, Materials Research Society Symposium Proceedings on Solid State Ionics IV, *MRS Proceedings vol.369*, 59 (1995).
70. "A Comparative Study of LiMn_2O_4 From Various Sources", with B. Ouyang, X. Cao, S. Kostov, M. denBoer, D. Fauteux, A. Massucco, M. vanBuren, M. McLin, *Ibid.*, p.29.
71. "High Pressure Conductivity and NMR Studies of Gel Electrolytes Based on Poly(acrylonitrile)", with F. Gerace, B. Scrosati, J.J. Fontanella, M.C. Wintersgill, C.A. Edmondson, *Solid State Ionics* 85, 173 (1996).
72. "Investigation of Mixed Cation Effects in $\text{PEO}_9:\text{Cu}_x\text{Zn}_{1-x}(\text{CF}_3\text{SO}_3)$ Polymer Electrolytes", with S. Panero, B. Scrosati, M. Giua and X. Cao, *Solid State Ionics* 83, 73 (1996).
73. " ^{23}Na NMR Studies of Na_xCoO_2 Cathodes", with P.E. Stallworth, M.M. Doeff, L. Ping, S.J. Visco, *Solid State Ionics*, 86-88, 797 (1996).
74. "Impedance and ^7Li NMR Studies of Polymer Electrolytes based on Poly(vinylidene difluoride)", with G.B. Appetecchi, F. Croce, M. Salomon, M. Tavares, S. Arumugam, Y. Wang, *Solid State Ionics*, 86-88, 307 (1996).
75. "High Pressure Electrical Conductivity and NMR Studies of Proton Transport in NAFION", with C.A. Edmondson, M.C. Wintersgill, J.J. Fontanella, Y. Wu, *Macromolecules* 29, 4944 (1996).
76. "Electrical conductivity and $^6,^7\text{Li}$ NMR Investigation of $\text{Li}_{1+y}\text{CoO}_2$ ", with M. Carewska, S. Scaccia, F. Croce, Y. Wang and S. Arumugam, *Solid State Ionics* 93, 227 (1997).
77. "The Effect of Nano-sized Inorganic Oxide Addition on the Electrical Properties of Poly(vinylidene Fluoride) - based Polymer Electrolytes", with G.B. Appetecchi, F. Croce, Y. Dai and Y. Wang, in Lithium Polymer Batteries, J. Broadhead and B. Scrosati, eds., Electrochemical Society Battery Division, Proceedings vol. 96-17, The Electrochemical Society, Inc., Pennington, NJ (1997), p.162.
78. "Magnetic Resonance and X-ray Absorption Study of $\text{Li}_x\text{V}_6\text{O}_{13}$ ", with P.E. Stallworth, S. Kostov, M. denBoer and C. Lampe-Onnerud, *Journal of Applied Physics*, 83, 1247 (1998).
79. "Lithium-7 NMR Studies of Concentrated LiI/PEO-Based Solid Electrolytes" with Y. Dai, D. Golodnitsky, G. Ardel, E. Strauss, E. Peled and Yu. Rosenberg, *Solid State Ionics*, 106, 25 (1998).
80. "Lithium-7 NMR Investigation of Lithium Insertion in Hard Carbon", with Y. Dai, Y. Wang, V. Eshkenazi and E. Peled, *Journal of the Electrochemical Society*, 145, 1179 (1998).
81. "Electrical, Thermal and NMR Investigation of Composite Solid Electrolytes Based on PEO, LiI and High Surface Area Inorganic Oxides", with Y. Dai, Y. Wang, S. Bajue, G. Golodnitsky, G. Ardel, E. Strauss and E. Peled, *Electrochimica Acta*, 43, 1557 (1998).
82. "Electrical Conductivity and NMR Studies of Methanol/Water Mixtures in NAFION", with C.A. Edmondson, P.E. Stallworth, M.C. Wintersgill, J.J. Fontanella and Y. Dai, *Electrochimica Acta*, 1295 (1998).

83. "Electrochemical Characteristics and NMR Studies of Amorphous Hydrated Ruthenium Oxides", with T.R. Jow, J.P. Zheng, X. Zhang and Y. Dai, in Ionic and Mixed Conducting Ceramics III, W. Gopel, et. al, Eds. Electrochemical Society Proceedings, Pennington, NJ **PV97-24**, (1997), p. 442.
84. "X-ray Absorption and NMR Studies of $\text{LiNi}_{1-x}\text{Co}_x\text{O}_2$ Cathodes Prepared by a Particulate Sol-Gel Process", with S. Kostov, Y. Wang, M. denBoer, C.C. Chang and P.N. Kumta, Materials Research Society Symposium Proceedings on Materials for Electrochemical Energy Storage and Conversion II, MRS vol.496, p.427 (1998).
85. "Pulsed Field Gradient NMR Investigation of Molecular Mobility of Trimethoxymethane in *Nafion* Membranes", with Y. Wu, T.A. Zawodzinski, M. C. Smart, G.K.S. Prakash, and G.A. Olah, *ibid*, p. 223.
86. "Lithium-7 NMR Investigation of Electrochemical Reaction of Lithium with SnO ", with Y. Wang, J. Sakamoto, S. Surampudi, and C.K. Huang, *Solid State Ionics*, **110**, 167 (1998).
87. "Bulk and Interfacial Ionic Conduction in $\text{LiI}/\text{Al}_2\text{O}_3$ Mixtures", with G. Ardel, D. Golodnitsky, E. Peled, Y. Wang and S. Bajue, *Solid State Ionics*, **113-115**, 477 (1998).
88. "Characterization of Lithium Capacity in Natural Graphite Before and after Mild Oxidation", with C. Menachem, Y. Wang, J. Flowers, and E. Peled, *Journal of Power Sources*, **76**, 180 (1998).
89. "X-ray Absorption Fine Structure Study of FeS_2 Cathodes in Lithium Polymer Electrolyte Batteries", with E. Strauss, D. Golodnitsky, S. Kostov, M. denBoer and E. Peled, *Journal of Power Sources*, **81-82**, 709 (1999).
90. "NMR, DSC, and High Pressure Electrical Conductivity Studies on Liquid and Hybrid Electrolytes", with P.E. Stallworth, J.J. Fontanella, M.C. Wintersgill, C.D. Scheidler, J. J. Immel, and A.S. Gozdz, *Journal of Power Sources*, **81-82**, 739 (1999).
91. "The Role of Electrolyte Upon SEI Formation Characteristics and Low Temperature Performance of Lithium-Ion Cells with Graphite Anodes", with M.C. Smart, B.V. Ratnakumar, and S. Surampudi, in Electrochemical Society Proceedings, vol. 98-16 (1999), p. 441.
92. "Irreversible Capacities of Graphite in Low Temperature Electrolytes for Lithium-ion Batteries", with M.C. Smart, B.V. Ratnakumar, Y. Wang, X. Zhang, and S. Surampudi, A. Hightower, C. Ahn, and B. Fultz, *Journal of the Electrochemical Society*, **146**, 3963 (1999).
93. "Studies of Cation-Anion and Cation-Polymer Association in Poly(ethylene oxide): $\text{Pb}(\text{CF}_3\text{SO}_3)_2$ Complexes", with C.P. Rhodes, B. Klassen, R. Frech and Y. Dai, *Solid State Ionics*, **126**, 251 (1999).
94. "Uniaxial-stress Effects in Poly(ethylene oxide)- LiI Polymer Electrolyte Film: a ^7Li Nuclear Magnetic Resonance Study", with S.H. Chung, Y. Wang, D. Golodnitsky, and E. Peled, *Electrochemical and Solid State Letters*, **2**, 553 (1999).
95. "Lithium Ion Batteries for Mars Exploration Missions", with B. V. Ratnakumar, M. C. Smart, C. K. Huang, D. Perrone, and S. Surampudi, *Electrochimica Acta*, **45**, 1513 (2000).
96. "Electrical Conductivity and NMR Studies of PEG and PPG Containing Lithium Salts", with J.J. Fontanella, M.C. Wintersgill, P.E. Stallworth, S.A. Newman, S.H. Chung, and Y. Wang, *Solid State Ionics*, **135**, 155 (2000).
97. "Complex Impedance Studies of Proton-Conducting Membranes", with C.A. Edmondson, P.E. Stallworth, J.J. Fontanella, M.C. Wintersgill, and S.H. Chung, *Solid State Ionics*, **135**, 419 (2000).
98. "NMR Studies of CuInS_2 and CuInSe_2 Crystals Grown by the Bridgman Method", with P.E. Stallworth, J.-F. Guillemoles, J. Flowers and J. Vedel, *Solid State Communications*, **113**, 527 (2000).

99. "Structural Aspects of Electrochemically Lithiated SnO: Nuclear Magnetic Resonance and X-ray Absorption Studies", with Y. Wang, J. Sakamoto, S. Kostov, A. Mansour, M. denBoer, C.-K. Huang and S. Surampudi, *Journal of Power Sources*, 89, 232 (2000).
100. "Mass Transport of Phosphoric Acid in Water: a ^1H and ^{31}H Pulsed Field Gradient Nuclear Magnetic Resonance Study", with S.H. Chung and S. Bajue, *Journal of Chemical Physics*, 112, 8515 (2000).
101. "Proton conducting polymer gels as new materials for electrochemical applications", with G. Zukowska, E. Zygadlo-Monikowska, N. Langwald, Z. Florjanczyk, Borkowska, P. Kuma, W. Wieczorek, and S.H. Chung, *Journal of New Materials for Electrochemical Systems* 3, 51 (2000).
102. "A New Approach to the Understanding of Ion Transport in Semicrystalline Polymer Electrolytes", with D. Golodnitsky, E. Peled, E. Livshits, Yu. Rozenberg, S.H. Chung, Y. Wang, and S. Bajue, *Journal of Electroanalytical Chemistry*, 491 (1-2): 203 (2000)
103. "A basic investigation of anhydrous proton conducting gel electrolytes", with W. Wieczorek, G. Zukowska, R. Borkowska, P. Kulesza, A. Lewera, and S.H. Chung, *Electrochimica Acta* 46, 1427-1438 (2001)
104. "Characterization of Perdeuterated H_3PO_4 - Doped Non-Aqueous Gel Electrolytes Using ^{31}P Nuclear Magnetic Resonance Spectroscopy", with S.H. Chung, Y. Wang, W. Bzucha, G. Zukowska, and W. Wieczorek, *Electrochimica Acta*, 46, 1651 (2001).
105. "Complex Impedance Studies of S-SEBS Block Copolymer Proton Conducting Membranes", with C.A. Edmondson, J.J. Fontanella, S.H. Chung, and G.E. Wnek, *Electrochimica Acta*, 46, 1623-1628 (2001)
106. " ^7Li Nuclear Magnetic Resonance Study of Lithium Insertion in Pristine and Partially Oxidized Graphite" with Y. Wang, V. Yufit, X. Guo, and E. Peled, *Journal of Power Sources*, 94, 230 (2001).
107. "Enhancement of Ion Transport in Polymer Electrolytes by Addition of Nanoscale Inorganic Oxides", with S.H. Chung, Y. Wang, L. Persi, F. Croce, B. Scrosati, and E. Plichta, *Journal of Power Sources*, 97-98, 478 (2001).
108. "Correlation between structural and electrical properties of Li Transition Metal Vanadates", with M. Arrabito, S. Bodoardo, N. Penazzi, S. Panero, P. Reale, B. Scrosati, Y. Wang, and X. Guo, *Journal of Power Sources*, 97-98, 644 (2001).
109. "Nuclear Magnetic Resonance Studies of Nanocomposite Polymer Electrolytes", with S.H. Chung, Y. Wang, M. Marcinek, L. Persi, F. Croce, W. Wieczorek, and B. Scrosati, *Journal of Physics: Condensed Matter*, 13 No 50, 11763-11768 (2001).
110. "SEI Formation on Lithium Ion Electrodes: a ^7Li NMR Study", with Y. Wang, X. Guo, J. Liu, and K. Amine, *Electrochemical and Solid State Letters*, 4, A68 (2001).
111. "Mixed Vanadium Oxides for Applications As Electrode Materials in Li Ion Cells", with M. Arrabito, S. Bodoardo, S. Ronchetti, N. Penazzi, S. Coluccia, G. Martra, D. Sidoti, Y. Wang, X. Guo, and S.G. Greenbaum, *Studies in Surface Science and Catalysis*, edited by A. Gamba, C. Coella, and S. Coluccia, Elsevier Science, 2001, p. 140.
112. "Fast Ion Transport Phenomena in Oriented Semicrystalline LiI-P(EO)_n -based Polymer Electrolytes", with D. Golodnitsky, E. Livshits, A. Ulus, Z. Barkay, E. Peled, I. Lapidés, and S.H. Chung, *Journal of Physical Chemistry A*, 105, 10098-10106 (2001).
113. "Magnetic Resonance Studies of Chemically Intercalated $\text{Li}_{1+x}\text{V}_2\text{O}_5$ ", with P.E. Stallworth, F.S. Johnson, S. Passerini, J. Flowers, W. Smyrl, and J.J. Fontanella, *Solid State Ionics*, 146, 43 (2002).

114. "Nuclear Magnetic Resonance Studies of Lithium Ion Battery Materials", with C. P. Grey, *Bulletin of the Materials Research Society*, 27, 613 (2002).
115. "Magnetic Resonance Studies of Chemically Intercalated $\text{Li}_x\text{V}_2\text{O}_5$ Aerogels", with P.E. Stallworth, F.S. Johnson, S. Passerini, J. Flowers, and W. Smyrl, *Journal of Applied Physics*, 92, 3839 (2002).
116. "Defect physics of CuInSe_2 for photovoltaic applications using extended X-ray absorption fine structure (EXAFS)", with Theanne Schiros, Scott Calvin, P. E. Stallworth, Faisal Alamgir, J.-F. Guillemoles, and M. L. den Boer, *Materials Research Society Symposium Proceedings*, 763, 13 (2003).
117. "Nuclear Magnetic Resonance Studies of Nanocomposite Gel Electrolytes", with Sabina Abbrent, Song H. Chung, Jacob Muthu, and Emmanuel P. Giannelis, *Electrochimica Acta*, 48, 2113 (2003).
118. "A ^1H Pulse Gradient Spin-Echo Study of Mass Transport of Dimethyl Oxalate and Ethylene Glycol: New Fuels for the Direct Oxidation Fuel Cell", with S. Suarez-Gustave, S.H. Chung, S. Greenbaum, S. Bajue, E. Peled, T. Duvdevani, and A. Aharon, *Electrochimica Acta*, 48, 2187 (2003).
119. "Solid Nanocomposite Polymer Electrolytes for Li-ion Batteries", with E. Greene, S. Abbrent, I.W. Chung, K.B. Chin, and M.C. Smart, and G.K.S. Prakash, *Electrochimica Acta*, 48, 2149 (2003).
120. "Lithium Zeolytic Inorganic-Organic Polymer Electrolyte Based on PEG600, Li_2PdCl_4 , and $\text{Li}_3\text{Fe}(\text{CN})_6$: Ion conduction Mechanism, Thermal Stability, and Morphology", with M. Vitadello, S. Suarez-Gustave, S.H. Chung, K. Fujimoto, V. Di Noto, and T. Furukawa, *Electrochimica Acta*, 48, 2227 (2003).
121. "Lithium-7 Nuclear Magnetic Resonance and Ti K-edge X-ray Absorption Spectroscopic Investigation of Electrochemical Lithium Insertion in $\text{Li}_x\text{Ti}_5\text{O}_{12}$ ", with Fabio Ronci, Phillip Stallworth, Theanne Schiros, Xiaodong Guo, Faisal Alamgir, Priscilla Reale, Marten denBoer, and Bruno Scrosati, *Journal of Power Sources*, 119-121, 631 (2003).
122. "Synchrotron X-Ray Absorption Measurements of FeS_2 - Based Li Batteries with a Composite Polymer Electrolyte", with E. Strauss, S. Calvin, H. Mehta, D. Golodnitsky, E. Peled, and M. denBoer, *Solid State Ionics*, 164, 51 (2003).
123. "Effect of nanosized SiO_2 on the transport properties of solventless $\text{P}(\text{EO})_{20}\text{LiBETI}$ polymer electrolytes: a solid state NMR study", with S. Suarez, S. Abbrent, J.H. Shin, and S. Passerini, *Solid State Ionics*, 166, 407 (2004).
124. "Characterization of Electrospayed Nafion Films", with E. H. Sanders, K. A. McGrady, G. E. Wnek, C. A. Edmondson, J. M. Mueller, J. J. Fontanella, and S. Suarez, *Journal of Power Sources*, 129, 55 (2004).
125. "A Solid-State ^{51}V NMR Characterization of Vanadium Sites in $\text{LiCo}_x\text{Ni}_{1-x}\text{VO}_4$ ", with P.E. Stallworth, X. Guo, E. Tatham, M. Arrabito, and N. Penazzi, *Solid State Ionics*, 170, 181 (2004).
126. "X-ray diffraction and ^7Li nuclear magnetic resonance studies of iron and cobalt substituted LiNiO_2 prepared from inorganic transition metal nitrates", with X. Guo, F. Ronci, and B. Scrosati, *Solid State Ionics*, 168 pp. 37-49 (2004).
127. "High Pressure NMR Study of Water Self-Diffusion in NAFION-117 Membrane", with J. R.P. Jayakody, P.E. Stallworth, E. Mananga, J. Zapata-Farrington, *Journal of Physical Chemistry B* 108, 4260 (2004).
128. "X-ray Absorption Spectroscopy Investigation of the Sub-Nanoscale Strain in Thin-Film Lithium Ion Battery Cathodes", with F. Alamgir, J. VanSluytman, D. Carter, J. Whitacre, C.-C. Kao, and M. denBoer, *Materials Research Society Symposium Proceedings*, , vol .822, S2.3.1 (2004).
129. "New Generation Of Ordered Polymer Electrolytes For Lithium Batteries", with D. Golodnitsky, E.

- Livshits, R. Kovarsky, E. Peled, S. Chung, and S. Suarez, *Electrochemical and Solid State Letters*, 7, A412-A415 (2004).
130. “A New Class of Lithium Hybrid Gel Electrolyte (HE) Systems”, with M. Vittadello, S. Suarez, K. Kano, V. Di Noto, and T. Furukawa, *Journal of Physical Chemistry B*, 108, 18832 (2004).
131. “High Field ^7Li and ^{19}F MAS NMR identification of LiF in the SEI Layer in Lithium Ion Battery Electrodes”, with B.M. Meyer, N.D. Leifer, S. Sakamoto, and C.P. Grey, *Electrochemical and Solid State Letters*, 8, A145 (2005).
132. “Solid State NMR Studies of Lithium Phosphorus Oxynitride Films Prepared by Nitrogen Ion Beam-Assisted Deposition”, with P.E. Stallworth, F. Vereda, T.E. Haas, P. Zerigian, and R. Goldner, *Journal of the Electrochemical Society*, 152, A516 (2005).
133. “A Multinuclear NMR study of ion transport in $\text{P}(\text{EO})_n\text{LiBETI}$ complexes”, with S. Suarez, J. Jayakody, S. Abbrent, J. H. Shin, S. Passerini, *Solid State Ionics*, 176, 1113 (2005).
134. “LiCoO₂ thin-film batteries: Structural changes and charge compensation”, with F.M. Alamgir, E. Strauss, J.F. Whitacre, M. Denboer, S. Neih, And C.-C. Kao, *Journal of the Electrochemical Society*, 152, A845 (2005).
135. “A Lithium Z-Iope Based on PEG600, $(\text{CH}_3)_2\text{SnCl}_2$, and $\text{Li}_3\text{Fe}(\text{CN})_6$ ”, with M. Vittadello, S. Gustave, K. Fujimoto, V. Di Noto, and T. Furukawa, *Journal of the Electrochemical Society*, 152, A956 (2005).
136. “The Effect of Electrolyte Type upon the High Temperature Resilience of Lithium Ion Cells”, with M. C. Smart, B. V. Ratnakumar, J. Whitacre, L. Whitcanack, K. Chin, M. Rodriguez, D. Zhao, and S. Surampudi, *Journal of the Electrochemical Society*, 152, A1096 (2005).
137. “Two new siloxanic proton conducting membranes: Part II. Proton conductivity mechanism and NMR study”, with Vito Di Noto, Michele Vittadello, Jayakody R.P. Jayakody, and Ameesh N. Khalfan. *Electrochimica Acta* 50, 4007 (2005).
138. “Effect of calixpyrrole in PEO–LiBF₄ polymer electrolytes” with M. Kalita, M. Bukat, M. Ciosek, M. Siekierski, S.H. Chung, T. Rodriguez, R. Kovarsky, D. Golodnitsky, E. Peled, D. Zane, B. Scrosati, and W. Wiczorek, *Electrochimica Acta* 50, 3942 (2005).
139. “Cycling-Induced Degradation of LiCoO₂ Thin-Film Cathodes at Elevated Temperature”, with J.S. Van Sluytman, W.C. West, J.F. Whitacre, and F.M. Alamgir, *Electrochimica Acta*, 51, 3001 (2006).
140. “Anhydrous Proton Conducting Polymeric Electrolytes for Fuel Cells”, with S. R. Narayanan, Shiao-Pin Yen, and L. Liu, *Journal of Physical Chemistry B*, 110, 3942 (2006).
141. “Characterization of Single Walled Carbon Nanotube –Polyvinylene Difluoride Composites” with J.R.P. Jayakody and F.J. Owens, *Composites Science and Technology*, 66, 1280-1284 (2006).
142. “NMR investigation of water and methanol transport in sulfonated polyarelenethioethersulfones for fuel cell applications, with J.R.P. Jayakody, A. Khalfan, E.S. Mananga, T.D. Dang and R. Mantz, *Journal of Power Sources*, 156, 195-199 (2006).
143. “Pyrite-induced hydroxyl radical formation and its effect on nucleic acids” with Corey A Cohn, Steffen Mueller, Eckard Wimmer, Nicole Leifer, Daniel R Strongin, and Martin AA Schoonen. *Geochemical Transactions* 7, 3 (2006); Published online 2006 April 4. doi: 10.1186/1467-4866-7-3
144. “Polymeric $\delta\text{-MgCl}_2$ nanoribbons”, with Michele Vittadello, Philip E. Stallworth, Faisal M. Alamgir,

- Sophia Suarez, Sabina Abbrent, Charles M. Drain, and Vito Di Noto, *Inorganica Chimica Acta*, **359**, 2513 (2006).
145. “Ormosil/SPEEK Based Hybrid Composite Proton Conducting Membranes”, with Silvia Licoccia, M. Luisa Di Vona, Alessandra D’Epifanio, Debora Marani, Michele Vittadello, and Jayakody R. P. Jayakody, *Journal of the Electrochemical Society*, **153** A1226-A1231 (2006).
 146. “Multinuclear NMR Studies Of Mass Transport Of Phosphoric Acid In Water” with J. R. P. Jayakody¹, E. S. Mananga², A. Khalfan², S. H. Chung³, and R. Lopato, proceedings of the 10th Asian Conference on Solid State Ionics (World Scientific Publishers, Singapore), 2006, pp 19-28.
 147. “Morphology of PI-PEO Block Copolymers for Lithium Batteries”, Chenchen Xue, Mary Ann B. Meador, Valerie A. Cubon, Lei Zhu, Jason J. Ge, Stephen Z. D. Cheng, R. K. Eby, Ameesh Khalfan, George D. Bennett, and Steve G. Greenbaum, *Polymer*, **47**, 6149 (2006).
 148. “Investigation Of Fundamental Transport Properties And Thermodynamics In Diglyme-Salt Solutions”, with M. Petrowsky, R. Frech, S. Suarez, and J.R.P. Jayakody, *Journal of Physical Chemistry B*, **110**, 23012 -23021, (2006).
 149. “Solid State NMR Characterization of Electrolyte Breakdown Products in Nonaqueous Asymmetric Hybrid Supercapacitors” with I. Nicotera, G. D. McLachlan, G. D. Bennett, I. Plitz, F. Badway, and G. G. Amatucci, *Electrochemical and Solid State Letters*, **10**, A5 (2007).
 150. “NMR Studies Of Mass Transport In High Acid Content Fuel Cell Membranes Based On Phosphoric Acid and Polybenzimidazole, with J.R.P. Jayakody, S.H. Chung, Lisa Durantino, H. Zhang, L. Xiao, and B. Benicewicz, *Journal of the Electrochemical Society*, **154**, B242 (2007).
 151. “NMR Characterization of Composite Polymer Membranes for Low Humidity PEM Fuel Cells”, with Isabella Nicotera, Tao Zhang, and Andrew Bocarsly, *Journal of the Electrochemical Society*, **154**, B466 (2007).
 152. “Nuclear Magnetic Resonance and X-Ray Absorption Spectroscopic Studies of Lithium Insertion in Silver Vanadium Oxide Cathodes”, with N.D. Leifer, F.M. Alamgir, A. Colon, K. Martocci, N.R. Gleason, R.A. Leising, E.S. Takeuchi, T.B. Reddy, *Journal of the Electrochemical Society*, **154**, A500 – 506 (2007).
 153. “A Nuclear Magnetic Resonance Study of Room Temperature Ionic Liquids with $-\text{CH}_2\text{Si}(\text{CH}_3)_3$ vs $-\text{CH}_2\text{C}(\text{CH}_3)_3$ Substitutions on the Imidazolium Cations”, with Song H. Chung, Richard Lopato, Hieaki Shirota, Edward W. Castner, Jr., and James F. Wishart, *Journal of Physical Chemistry B*, . 2007, **111**, 4885-4893.
 154. “Lithium transport properties of solid electrolytes based on PEO/CF₃SO₃Li and aluminum carboxylate” with E. Zygadło-Monikowska, Z. Florjańczyk, E. Rogalska-Jońska, A. Werbanowska, N. Langwald, D. Golodnitsky, E. Peled, R. Kovarsky, S.H. Chung, *Journal of Power Sources*, **173**, 734-742 (2007).
 155. “Interpreting the structural and electrochemical complexity of 0.5Li₂MnO₃•0.5LiMO₂ electrodes for lithium batteries (M=Mn_{0.5-x}Ni_{0.5-x}Co_{2x}, 0≤x≤0.5)”, with S.-H. Kang, P. Kempgens, J. Kropf, K. Amine, and M. M. Thackeray, *Journal of Materials Chemistry*, 2007, **17**, 2069–2077
 156. “Reversible Intercalation of Fluoride-Anion Receptor Complexes in Graphite”, with William West, Jay Whitacre, Nicole Leifer, Marshall Smart, Ratnakumar Bugga, Mario Blanco, and S. Narayanan, *Journal of the Electrochemical Society*, **154** A929-A936 (2007).
 157. “Spectroscopic analysis of SEI formation in Lithium-ion batteries”, with N. D. Leifer, in *Advanced Materials and Methods for Lithium-Ion Batteries*, SS. Zhang, ed. Series on Recent Research Developments in Electrochemistry, Research Signpost. 2007.

158. "Synthesis and Characterization of New Types of Ionic Liquids", with S. Lall-Ranmarine, D. Coleman, J. Wishart, M. Thomas, A. Ipe, S. Suarez, and R. Engel in *Molten Salts XIV*, R.A. Mantz, P.C. Trulove, H.C. DeLong, G.R. Stafford, R. Hagiwara, and D.A. Costa, eds., p.303. The Electrochemical Society, Pennington, NJ 2007.
159. "Novel Li Ion Conducting Polymer Gel Electrolytes Based on Ionic Liquid / PVDF-HFP Blends", with Hui Ye, Jian Huang, John Xu, and Amish Khalfan, *Journal of the Electrochemical Society*, **154**, A1048-A1057 (2007).
160. "Water And Proton Transport Properties Of Hexafluorinated Sulfonated Poly (Arylenethioethersulfone) Copolymers For Applications To Proton Exchange Membrane Fuel Cells" with Amish N. Khalfan, Luz M. Sanchez, Chandana Kodiweera, Zongwu Bai and Thuy D. Dang, *Journal of Power Sources*, **173**, 853 (2007).
161. "Ferromagnetic resonance studies of surface and bulk spin-wave modes in a CoFe/PtMn/CoFe multilayer film", with Cheng Wu, Amish N. Khalfan, Carl Pettiford, Nian X. Sun, and Yuhang Ren, *Journal of Applied Physics*, **103**, 07B525 (2008).
162. "New Membranes Based on Ionic Liquids for PEM Fuel Cells at Elevated Temperatures" with H. Ye, J. Huang and J. Xu, N.A.C. Kodiweera, and J.R.P. Jayakody, *Journal of Power Sources*, **178**, 651-660 (2008).
163. "NMR investigation of water and methanol mobility in nanocomposite fuel cell membranes", with I. Nicotera, A. Khalfan, G. Goenaga, T. Zhang, and A. Bocarsly, *Ionic*s, **14**, 243 (2008).
164. "Effect of a Proton Conducting Filler on the Physico-Chemical Properties of SPEEK-based Membranes" with B.Mecheri, A.D'Epifanio, L.Pisani, F.Chen, E.Traversa, F.C.Weise, and S. Licoccia, in *Fuel Cells*, 2009 p.372-380, Wiley-VCH. DOI: 10.1002/fuce.200800132
165. "High-resolution NMR characterization of a spider-silk mimetic composed of 15 tandem repeats and a CRGD motif", with Glendon D. McLachlan, Joseph Slocik, Robert Mantz, David Kaplan, Sean Cahill, and Mark Girvin, *Journal of Protein Science*, **18**, 206-216 (2009).
166. "SPEEK-based Composite Membranes for Direct Methanol Fuel Cells", with A.D'Epifanio, B.Mecheri, F.C.Weise, E.Traversa¹, and S. Licoccia, *Materials Research Society Proceedings*, [MRS Proceedings](#) 2008 1126 :) Fall, 2008. **Paper #:** 1126-S12-02 **DOI:** 10.1557/PROC-1126-S12-02
167. "Effect of Surface Phosphorus Functionalities of Activated Carbons Containing Oxygen and Nitrogen on Electrochemical Capacitance" with D. Hulicova-Jurcakova, M. Seredych, G-Q Lu, N.K.A.C. Kodiweera, P.E. Stallworth, and T.J. Bandoz, *Carbon*, **47**, 1576-1584 (2009).
168. "Improved Lithium Battery Electrolytes: from the Ionic Liquid to the Polymer Membrane", with A. Fernicola, F.C. Weise, J. Kagimoto, B. Scrosati, and A. Soletto, *Journal of the Electrochemical Society*, **156** A514 (2009).
169. "NMR and Raman Spectroscopic Characterization of Single Walled Carbon Nanotube Composites of Polybutadiene" with G.D. Bennett and F.J Owens, *Journal of Materials Research*, **24**, 2215-2220 (2009).
170. "Fluorinated Boroxin-Based Anion Receptors for Lithium Ion Batteries: Fluoride Anion Binding, Ab Initio Calculations, and Ionic Conductivity Studies", with V.P Reddy, M. Blanco, W. West, C.F. Weise, and N. Nair, *Journal of Physical Chemistry A*, **2009**, *113* (20), pp 5918-5926.
171. "Using NMR Spectroscopy in Polymer Electrolyte Research", with S. Abbrent, in *Polymer electrolytes: fundamentals and applications*, Diogo Santos and César Sequeira (eds), Woodhead Publishing ISBN-13: 978 1 84569 772 3, August 2010

172. "Multifunctional MnO₂-Carbon Nanoarchitectures Exhibit Battery and Capacitor Characteristics in Alkaline Electrolytes", with Jeffrey W. Long, Megan B. Sassin, Anne E. Fischer, Debra R. Rolison, Azzam N. Mansour, Valencia S. Johnson, and Phillip E. Stallworth, *Journal of Physical Chemistry C*, 2009, 113 (41), pp 17595-17598.
173. "Composite Nafion/sulfonated zirconia membranes: effect of the filler surface properties on proton transport characteristics", with Alessandra D'Epifanio, M. Assunta Navarra, F. Christoph Weise, Barbara Mecheri, Jaime Farrington, and Silvia Licoccia, *Chemistry of Materials*, 22, 813 (2010).
174. "Solid State NMR Studies of Chemically Lithiated CF_x", with N.D. Leifer, V.S. Johnson, R. Ben-Ari, H. Gan, J. M. Lehn, R. Guo, W Lu, B. C. Muffoletto, T. Reddy, P.E. Stallworth, *Journal of the Electrochemical Society*, 157, A148-154 (2010).
175. "A Fundamental Study of the Transport Properties of Aqueous Superacid Solutions", with S.N. Suarez, J.R.P. Jayakody, T.A. Zawodzinski, and J.J. Fontanella, *Journal of Physical Chemistry B*, 114, 8941-7 (2010).
176. "Nuclear Magnetic Resonance Studies of Polymer Electrolyte Membrane Fuel Cells", with Sophia Suarez, *The Chemical Record*, 10, 377-393 (2010).
177. "¹³C Solid State NMR Study of SEI Formation on Lithium Ion Battery Carbon Anodes Cycled in Isotopically Enriched Electrolytes Suggest Unusual Breakdown Products" with N. Leifer, M. Smart, S. Prakash, L. Gonzalez, L. Sanchez, C. P. Grey, *Journal of the Electrochemical Society*, 158, A471-A480 (2011).
178. "Conductivity Enhancement Induced by Casting of Polymer Electrolytes under a Magnetic Field", with R. Kovarsky, D. Golodnitsky, E. Peled, S. Khatun, P.E. Stallworth, S. Greenbaum, A. Greenbaum, *Electrochimica Acta* 57, 27 (2011).
179. "Solid State NMR Studies of Electrochemically Discharged CF_x", with S. DeSilva, R. Vazquez, P. Stallworth, T.P. Reddy, J. Lehn, R. Guo, and H. Gan, *Journal of Power Sources*, 196, 5659-5666 (2011).
180. "Iodide-Conducting Polymer Electrolytes based on Poly-Ethylene Glycol and MgI₂: Synthesis and Structural Characterization", with Michele Vittadello, David I. Waxman, Paul J. Sideris, Zhehong Gan, Ketu Vezzù, Enrico Negro, Ahmad Safari, and Vito Di Noto, *Electrochimica Acta*, 57, 112-122, (2011).
181. "Inorganic-Organic Membranes Based on Nafion, [(ZrO₂)-(HfO₂)_{0.25}] and [(SiO₂)-(HfO₂)_{0.28}] Nanoparticles. Part II: Relaxations and Conductivity Mechanism", with Nicola Boaretto, Enrico Negro, Phil. E. Stallworth, Sandra Lavina, Vito Di Noto, *International Journal of Hydrogen Energy*, 37, 6215-6227 (2012).
182. "Advanced Techniques to Elucidate Electrochemical Reactions in Lithium Ion Batteries", with P.J. Sideris, **ENCYCLOPEDIA OF SUSTAINABILITY SCIENCE AND TECHNOLOGY**, Springer, Volume no. 9, pp. 6067—6097 (2012).
183. "Tin-coated graphite electrodes as composite anodes for Li-ion batteries. Effects of tin coatings thickness toward intercalation behavior", with Francesco Nobili, Marilena Mancini, Phil E Stallworth, Fausto Croce, and Roberto Marassi, *Journal of Power Sources*, 198, 243-250 (2012).
184. "Diffusion Coefficients from ¹³C PGSE-NMR Measurements— Fluorine-Free Ionic Liquids with DCTA⁻ and DCA⁻ Anions", with Cristelle Portet, Sufia Khatun, Eric Fox, Patrick Judeinstein, Michel Armand, and Wesley Henderson, *Journal of Physical Chemistry Letters*, 3, 441-444 (2012).
185. "Electrical and Electron Paramagnetic Resonance Spectroscopy Characterization of Mn-doped Nanostructured TiO₂ for Capacitor Applications", with Rafael Vazquez-Reina, Sheng Chao, Vladimir

Petrovsky, and Fatih Dogan, *Journal of Power Sources*, 210, 21-24 (2012).

186. “⁷Li and ³¹P Nuclear Magnetic Resonance Studies of Single Crystal LiMPO₄ (M = Co, Fe)”, with P. Sideris, R. Samuelli, P.E.Stallworth, and D. Vaknin, in *Advances in Inorganic Phosphate Materials, Ceramic Transactions*, vol. 233, American Ceramic Society, Wiley, 2012, p.117-123.
187. “Solid State Multinuclear Magnetic Resonance Investigation of Electrolyte Decomposition Products on Lithium Ion Electrodes”, with J.H.S.R. DeSilva, V. Udinwe, P.J. Sideris, M. C. Smart, F.C. Krause, C. Hwang, and K. A. Smith, *Electrochemical Society Transactions*, Volume 41, Issue 41, p 207-214 (2012).
188. “Effect of Peptide Nanotube Filler on Structural and Ion-transport Properties of Solid Polymer Electrolytes”, with K. Goldstein, D. Golodnitsky, E. Peled, L. Adler-Abramovich, E. Gazit, and S. Khatun, *Solid State Ionics*, 220, 39-46 (2012).
189. "Multinuclear NMR Study of the Effect of Acid Concentration on Ion Transport in Phosphoric Acid Doped Polybenzimidazole Membranes", with S.N. Suarez, N.K.A.C. Kodiweera, P. Stallworth, S. Yu, and B. Benicewicz, *Journal of Physical Chemistry B*, 116, 12545-51(2012). DOI:10.1021/jp304761t
190. “Subsurface Diffusion of Oxide Electrolyte Decomposition Products in Metal Fluoride Nanocomposite Electrodes, with Andrew J. Gmitter, Anna Halajko, Paul J. Sideris, and Glenn G. Amatucci, *Electrochimica Acta*, 88, 735-744 (2013).
191. “A structural, spectroscopic and electrochemical study of a lithium ion conducting Li₁₀GeP₂S₁₂ solid electrolyte”, with Jusef Hassoun, Roberta Verrelli, Priscilla Reale, Stefania Panero, Gino Mariotto, and Bruno Scrosati, *Journal of Power Sources*, 229, 117-122 (2013).
<http://dx.doi.org/10.1016/j.jpowsour.2012.11.130>.
192. “Achieving electrochemical capacitor functionality from a traditional battery material: Conformal, nanoscale LiMn₂O₄ coatings on 3-D, device-ready carbon nanoarchitectures”, with Megan B. Sassin, Jeffrey W. Long, Phillip E. Stallworth, Azzam N. Mansour, Benjamin P. Hahn, Katherine A. Pettigrew, and Debra R. Rolison, *Journal of Materials Chemistry A*, DOI: 10.1039/c2ta00937d 1, 2431-2440 (2013).
193. “Examination of Methods to Determine Free-Ion Diffusivity and Number Density from Analysis of Electrode Polarization”, with Yangyang Wang, Che-Nan Sun, Fei Fan, Joshua R. Sangoro, Marc B. Berman, Thomas A. Zawodzinski, and Alexei P. Sokolov, *Physical Review E*, 87, 042308 (2013).
194. Cation-only Conduction in New Polymer/SiO₂ Nano Hybrid Electrolytes, with Irune Villaluenga, Michel Armand, Xavier Bogle, Izaskun Gil de Muro and Teófilo Rojo, *Journal of Materials Chemistry A*, 2013, 1, 8348-8352. DOI: 10.1039/C3TA11290J
195. “Recent Progress in NMR Spectroscopy of Polymer Electrolytes for Lithium Batteries”, with Sabina Abbrent, *Current Opinion in Colloid and Interface Science*, 18, 228–244 (2013).
196. “Understanding Li⁺-Solvent Interaction in Non-aqueous Carbonate Electrolytes with ¹⁷O NMR”, with Xavier Bogle, Rafael Vazquez, Arthur von Cresce, Kang Xu, *Journal of Physical Chemistry Letters*, 4, 1664-1668 (2013).
197. “Influence of Solvent on Ion Aggregation and Transport in pyr₁₅TFSI Ionic Liquid – Aprotic Solvent Mixtures” with Oleg Borodin, Eric Fox, Wesley A. Henderson, Marc Berman, and Mallory Gobet, *Journal of Physical Chemistry B*, 117, 10581–10588 (2013) DOI: 10.1021/jp406541e
198. “PEO-NaTFSI polymer electrolyte for sodium-based battery application”, J. Serra Moreno, M. Armand, M.B.Berman, S.G. Greenbaum, B. Scrosati, and S. Panero, *Journal of Power Sources*, Volume 248, 15 February 2014, Pages 695–702
199. Single-ion-conducting nanocomposite polymer electrolytes based on PEG400 and anionic nanoparticles:

- Part 1. Synthesis, structure and properties, ”, with F. Bertasi, K. Vezzù, G. A. Giffin, M. Vittadello, V. Di Noto *International Journal of Hydrogen Energy*, 39, 2872–2883 (2014).
200. “Single-ion-conducting nanocomposite polymer electrolytes based on PEG400 and anionic nanoparticles: Part 2. Electrical characterization”, with F. Bertasi, K. Vezzù, G. A. Giffin, T. Nosach, P. Sideris, M. Vittadello, V. Di Noto *International Journal of Hydrogen Energy*, 4, 2884–2895 (2014).
201. “Charge Transfer in Li/CF_x-Silver Vanadium Oxide Hybrid Cathode Batteries Revealed By Solid State ⁷Li and ¹⁹F Nuclear Magnetic Resonance Spectroscopy” , Paul J. Sideris, Rowena Yew, Ian Nieves, Kevin Chen, Gaurav Jain, Craig L. Schmidt, Steve G. Greenbaum, *Journal of Power Sources*, Volume 254, 15 May 2014, Pages 293–297. doi.org/10.1016/j.jpowsour.2013.12.108
202. "Layered-Layered Composite Li₂MnO₃- LiMO₂ (M=Mn, Ni, Co) Synthesis Using LiCl Molten Flux for Cathodes Materials in Li-ion Batteries", with Edwin Ortiz-Quiles, Jessica Soler, Mallory Gobet, Tetiana Nosach, Oscar Resto, Omar Garcia-Ricard, Arturo Hernandez-Maldonado, William West, Carlos Cabrera, *RSC Advances*, 4 12018 (2014).
203. “Electrical Properties of BaTiO₃ Nanoparticles in Polycarbonate”, with J. F. Lomax, E. A. Lomax, P. Q. Lomax, J. J. Fontanella, C. A. Edmondson, M. C. Wintersgill, M. A. Westgate, M. A. Wolak , Xavier Bogle, A. Rua, *Journal of Applied Physics*, 115, 104103 (2014).
204. "Vanadium Doped Nanostructured TiO₂ Dielectrics", with J. Peng, S. Chao, and F. Dogan (2014), *Materials Research Society Proceedings*, 1645, mrsf13-1645-zz07-02 doi:10.1557/opl.2014.256.
205. A Ceramic/Polymer Separator for a Rechargeable Alkali-Ion Battery, with Kyusung Park, Joon Hee Cho, Kadhivaran Shanmuganathan, Jie Song, Jing Peng, Mallory Gobet, Christopher J. Ellison, and John B. Goodenough, *Journal of Power Sources*, 263, 52-58 (2014).
206. “Polymer Electrolytes for Solid State Batteries”, with Sabina Abbrent, in Handbook of Solid State Batteries (2nd Ed., ed. N.J. Dudney, W.C. West, J. Nanda, World Scientific, and Imperial College Press, 978-981-4651-89-9 (2015), Chapter 16.
207. “Structural Characterization and Li dynamics in new Li₃PS₄ ceramic ion conductor by solid-state and pulsed-field gradient NMR”, with Mallory Gobet, Chengdu Liang, and Gayatri Sahu, *Chemistry of Materials*, **DOI:** 10.1021/cm5012058. 26(11):3558-3564 (2014).
208. “Ion solvation and the search for a correlation with electrode passivation” with A Von Wald Cresce, A., Russell, S.M., Fu, A., (...), Gobet, M., *Materials Research Society Symposium Proceedings* 1740, 49-57 (2015).
209. “An Iodide Based Li₇P₂S₈I Superionic Conductor”, with Ezhiylmurugan Rangasamy, Zengcai Liu, Mallory Gobet, Kartik Pilar, Gayatri Sahu, Wei Zhou, Hui Wu, and Chengdu Liang, *Journal of the American Chemical Society*, 137(4):1384-7 (2015). doi: 10.1021/ja508723m
210. “Comparative Study of Ether-Based Electrolytes for Application in Lithium–Sulfur Battery”, with Lorenzo Carbone, Mallory Gobet, Jing Peng, Matthew Devany, Bruno Scrosati, and Jusef Hassoun, *Applied Materials & Interfaces (ACS)*, (2015), 7, 13859–13865. <http://dx.doi.org/10.1021/acsami.5b02160>
211. “Interactions between water and 1-butyl-1-methylpyrrolidinium ionic liquids”, with Tatiana A. Fadeeva , Pascale Husson, Jessalyn A. DeVine, Margarida F. Costa Gomes, and Edward W. Castner, Jr., *Journal of Chemical Physics*, 143, 064503 (2015); <http://dx.doi.org/10.1063/1.4928065>
212. “Novel Solid Polymer-in-Ceramic Electrolyte Formed by Electrophoretic Deposition”, with R. Blanga, L. Burstein, M. Berman, and D. Golodnitsky. *Journal of the Electrochemical Society*, 162(11) D3084-D3089 (2015).

213. "On order and disorder in polymer electrolytes" with D. Golodnitsky, E. Strauss, E. Peled, *Journal of the Electrochemical Society*, 162 (14) A2551-A2566 (2015).
214. "Electrolytes for Secondary Magnesium Batteries Based on Chloroaluminate Ionic Liquids", with Federico Bertasi, Chaminda Hettige, Fatemeh Sepehr, Xavier Bogle, Gioele Pagot, Ketu Vezzù, Enrico Negro, Stephen J. Paddison, Michele Vittadello, and Vito Di Noto, *ChemSusChem*, 8, 3069-3076 (2015). DOI: 10.1002/cssc.201500339.
215. "Polyethylene glycol dimethyl ether (PEGDME)-based electrolyte for lithium metal battery", with Lorenzo Carbone, Mallory Gobet, Jing Peng, Matthew Devany, Bruno Scrosati, and Jusef Hassoun, *Journal of Power Sources*, 299, 460-464 (2015).
216. NMR Studies of Solvent free Ceramic Composite Polymer Electrolytes - a Brief Review, with Marc Berman, *Membranes*, 2015, 5, 915-923; doi:10.3390/membranes5040915
217. "Anion Solvation in Carbonate-Based Electrolytes", with Arthur von Wald Cresce, Mallory Gobet, Oleg Borodin, Jing Peng, Kang Xu, *Journal of Physical Chemistry C*, 2015, 119, 27255-27264.
218. "Insight on the Li₂S electrochemical process in a composite configuration electrode, with Lorenzo Carbone, Roberta Verrelli, Mallory Gobet, Jing Peng, Matthew Devany, Bruno Scrosati, and Jusef Hassoun, *New Journal of Chemistry*, 40, 2935 (2016).
219. "Solid State Magnetic Resonance Investigation of the Thermally Induced Structural Evolution of Silicon Oxide-Doped Hydrogenated Amorphous Carbon", with Jing Peng, Anastasiia Sergiienko, Filippo Mangolini, P. E. Stallworth, and Robert W. Carpick, *Carbon*, 105, 163-175 (2016).
220. "Enhancement of proton mobility and mitigation of methanol crossover in sPEEK fuel cells by an organically modified titania nanofiller", with I. Nicotera, C. Simari, S. Licoccia, S. Bruti, S.N. Suarez, and K. Pilar *Journal of Solid State Electrochemistry*, (2016) 20: 1585. doi:10.1007/s10008-016-3167-x
221. Peculiarities of ion transport in confined-in-ceramics concentrated polymer electrolyte, with R. Blanga, M. Berman, M. Biton, F. Tariq, V. Yufit, A. Gladkikh, N. Brandon, and D. Golodnitsky, *Electrochimica Acta*, 208, 17-19 (2016)
222. Investigation of Electric Field Induced Broken Symmetries at Fe-doped SrTiO₃ Interfaces by Second Harmonic Generation, with D. Ascienzo, H. C. Yuan, T. J. M. Bayer, R. Maier, J. J. Wang, C. A. Randall, E. C. Dickey, H. B. Zhao, and Y. H. Ren, *Materials* 2016, 9, 883; doi:10.3390/ma9110883
223. "Observation of structural inhomogeneity at degraded Fe-doped SrTiO₃ interfaces", with D. Ascienzo, T. J. M. Bayer, R. Maier, C.A. Randall, and Y. H. Ren, *Applied Physics Letters*, 109 031602 (2016).
224. Natural Abundance Oxygen-17 NMR Investigation of Lithium Ion Solvation in Glyme-based Electrolytes, with J. Peng, L. Carbone, M. Gobet, M. Devany, and J. Hassoun, *Electrochimica Acta*, 213, 606-12 (2016).
225. "Investigation of the Effects of Mechanochemical Treatment on NaAlH₄ Based Anode Materials for Li-Ion Batteries" L. Cirrincione, L. Silvestri, C. Mallia, P. E. Stallworth, S. Greenbaum,* S. Brutti,* S. Panero,* and P. Reale, *Journal of The Electrochemical Society*, 163 (13) A1-A8 (2016)
226. "Mechanism of Conductivity Relaxation in Liquid and Polymeric Electrolytes: Direct Link between Conductivity and Diffusivity", C. Gainaru, E. W. Stacy, V. Bocharova, M. Gobet, A. Holt, T. Saito, S. Greenbaum, and A. P Sokolov, *Journal of Physical Chemistry B*, 120 (42), pp 11074-11083 (2016); DOI: 10.1021/acs.jpcc.6b08567
227. "Carbon Composites for High Energy Density Lithium Sulfur Battery using a Glyme-based Electrolyte" Lorenzo Carbone, Jing Peng, Marco Agostini, Mallory Gobet, Matthew Devany, Bruno Scrosati, Steve Greenbaum and Jusef Hassoun; *ChemElectrochem*, 4(1), 209 (2017) DOI: 10.1002/celec.201600586

228. Solvation Behavior of Carbonate-Based Electrolytes in Sodium Ion Batteries, with Arthur V. Cresce, Joshua A. Allen, Selena M. Russell, Oleg Borodin, Michael Dai, Jing Peng, Mallory Gobet, Kang Xu, Reginald E. Rogers, *Physical Chemistry Chemical Physics*, **19**, 574-586 (2017). DOI: 10.1039/C6CP07215A
229. NaAlH₄ nanoconfinement in a mesoporous carbon for application in lithium ion batteries, with L. Silvestri, A. Paolone, L. Cirrincione, P. Stallworth, S. Panero, S. Brutti, and P. Reale, *Journal of the Electrochemical Society*, 164(6) A1120-A1125 (2017).
230. “Characteristics of glyme electrolytes for sodium battery: NMR and electrochemical study”, Lorenzo Carbone, Stephen Munoz, Mallory Gobet, Matthew Devany, Steve Greenbaum, Jusef Hassoun, *Electrochimica Acta*, 231, 223-229 (2017).
231. “Relevant Features of a Triethylene Glycol Dimethyl Ether-Based Electrolyte for Application in Lithium Battery”, Lorenzo Carbone, Daniele Di Lecce, Mallory Gobet, Stephen Munoz, Matthew Devany, Steve Greenbaum and Jusef Hassoun, *ACS Applied Materials and Interfaces*, 2017, 9 (20), pp 17085–17095.
232. “Lithium Sulfur and Lithium Oxygen batteries: New Frontiers of Sustainable Energy Storage”, with Lorenzo Carbone and Jusef Hassoun, *Sustainable Energy and Fuels*, 2017, **1**, 228-247 .
233. “Probing Electrocolored Fe-doped SrTiO₃ Bulks using Optical Second Harmonic Generation”, with D. Ascienzo, T. J.M. Bayer, C.A. Randall, and Y. H. Ren, *Acta Materialia*, 126 (2017) 520-527.
234. “Nonlinear Optical Detections of Structural Distortions at Degraded Fe-doped SrTiO₃ Interfaces”, with O. Kurt, D. Ascienzo, Z. Cevher, T. J. M. Bayer, C. A. Randall, N. Madamopoulos, and Y. H. Ren, *Materials Chemistry and Physics* 198, 2017, Pages 131–136
235. “A Rayleighian approach for modeling kinetics of ionic transport in polymeric media”, with Rajeev Kumar, Jyoti P. Mahalik, Vera Bocharova, Eric W. Stacy, Catalin Gainaru, Tomonori Saito, Mallory P. Gobet, Bobby G. Sumpter, and Alexei P. Sokolov, *Journal of Chemical Physics*, 146, 064902 (2017); doi: 10.1063/1.4975309
236. “The Role of Ozone in the Formation and Structural Evolution of Graphene Oxide” with Sam Groveman, Jing Peng, Boris Itin, Ibrahim Diallo, Lawrence M. Pratt, Alexander Greer, Elizabeth J. Biddinger, Charles Michael Drain, Lynn Francesconi, Michele Vittadello, *Carbon*, Volume 122, October 2017, Pages 411-421.
237. "Investigation of Dynamics in BMIM TFSA ionic liquid through variable temperature and pressure NMR relaxometry and diffusometry”, with K. Pilar, A. Rua, S.N. Suarez, J. Hatcher, J. Wishart, *Journal of The Electrochemical Society*, 164(8) H5189-H5196 (2017).
238. “Polymeric peptide pigments with sequence-encoded properties”, Ayala Lampel, Scott A. McPhee, Hang-Ah Park, Gary G. Scott, Sunita Humagain, Doeke R. Hekstra, Barney Yoo, Pim W. J. M. Frederix, Tai-De Li, Rinat R. Abzalimov, Steven G. Greenbaum, Tell Tuttle, Chunhua Hu, Christopher J. Bettinger, Rein V. Ulijn, *Science*, vol 356 issue 6342, 1064 (2017).
239. “Liquid Structure with Nano-heterogeneity Promotes Cationic Transport in Concentrated Electrolytes”, Oleg Borodin, Liumin Suo, Mallory Gobet, Eric Gobrogge, Xiaoming Ren, Marco Olguin, Michael S. Ding, Marshall Schroeder, Arthur von Cresce, Jing Peng, Antonio Faraone, Stephen Munoz, Joseph Dura, Steve Greenbaum, Chunsheng Wang, Kang Xu, *ACS Nano* 11, 10462-10471 (2017).
240. “Chemical and Electrical Dynamics of Polyimide Film Damaged by Electron Radiation”, Engelhart DP, Plis E, Humagain S, Greenbaum S, Ferguson D, Cooper R, et al.. *IEEE Transactions on Plasma Science* 2017;45:2573-7.

241. "A Simple Approach for Making Viable Safe and High-Performances Lithium-Sulfur Battery", Lorenzo Carbone, Thomas Coneglian, Mallory Gobet, Stephen Munoz; Matthew Devany, Steve Greenbaum, Jusef Hassoun, *Journal of Power Sources*, 377 (2018) 26–35
242. "Anisotropic Ion Diffusion Measured by NMR and Electrochemically Driven Transport in Nanostructured Block-Copolymer Electrolytes", Ksenia Timachova, Irune Villaluenga, Lisa Cirrincione, Mallory Gobet, Rajashree, Bhattacharya, Xi Jiang, John Newman, Louis A. Madsen, Steve G. Greenbaum, Nitash P. Balsara, *Journal of Physical Chemistry B*, J. Phys. Chem. B, 122 (4), pp 1537–1544 (2018)
243. "Effect of CO₂ Absorption on Ion and Water Mobility in an Anion Exchange Membrane", J. Peng, A. L. Roy, P. V. Bonnesen, S. G. Greenbaum, and T. A. Zawodzinski, *Journal of Power Sources*, **380**, 64-75 (2018).
244. Investigation of Ion Aggregation in Ionic Liquids and Their Solutions with Lithium Salt Under High Pressure Kartik Pilar, Victor Balédent, Mehdi Zeghal, Patrick Judeinstein, Sangsik Jeong, Stefano Passerini, Steve Greenbaum, *Journal of Chemical Physics*, 148, 031102 (2018).
245. "Defect Chemistry and Electrical Properties of Garnet-Type Li₇La₃Zr₂O₁₂" Xiaowen Zhan, Shen Lai, Mallory P. Gobet, Steven G. Greenbaum, Mona Shirpour, *Physical Chemistry Chemical Physics*, 20, 1447 (2018)
246. "Connection between Lithium Coordination and Lithium Diffusion in Pyr12O1FTFSI Ionic Liquid Electrolytes", Guinevere A. Giffin, Arianna Moretti, Sangsik Jeong, Kartik Pilar, Marc Brinkkötter, Steven G. Greenbaum, Monika Schönhoff, and Stefano Passerini, *CHemSusCHem*, 2018, 11, 1981–1989. DOI 10.1002/cssc.201702288 (2018)
247. "Synthesis, Surface Chemistry and Pseudocapacitance Mechanisms of VN Nanocrystals Derived by a Simple Two-step Halide Approach", Daiwon Choi, Prashanth H. Jampani, J.R.P. Jayakody, Steven G. Greenbaum and Prashant N. Kumta, *Journal of Materials Chemistry B*, **230**, 8-19 (2018).
248. A novel polymer electrolyte membrane for application in solid state lithium metal battery", Berhanu W. Zewde, Lorenzo Carbone, Steve Greenbaum, Jusef Hassoun, *Solid State Ionics*, **317**, 97-102 (2018).
249. "Formation of Structural Defects and Strain in Electrodegraded Fe doped SrTiO₃ Crystals due to Oxygen Vacancy Migration", with D. Ascenzo, O. Kurt, T. Bayer, R. Maier, C. Randall, and Y. Ren, *Journal of the American Ceramic Society*, 101, 2545-2561 (2018)
250. "Fluorine-donating electrolytes enable highly reversible 5V-class Li metal batteries", Liumin Suo, Weijiang Xue, Mallory Gobet, Steve G Greenbaum, Chao Wang, Yuming Chen, Wan-Lu Yang, Yang-Xing Li, Ju Li, *Proceedings of the National Academy of Sciences*, 115 (6), 1156 – 1161 (2018).
251. Correlating Li⁺-solvation structure and its electrochemical reaction kinetics with sulfur in sub-nano confinement, Fu, Chengyin; Xu, Lihua; Aquino, Fredy; von Wald Cresce, Arthur; Gobet, Mallory; Greenbaum, Steven; Xu, Kang; Wong, Bryan; Guo, Juchen, *Journal of Physical Chemistry Letters*, 2018, 9, pp 1739–174
252. "Hybrid Aqueous/Non-Aqueous Electrolyte for Safe and High Energy Li-ion Batteries", Fei Wang, Oleg Borodin, Michael S. Ding, Mallory Gobet, Xiulin Fan, Tao Gao, Nico Edison, Wei Sun, Steve Greenbaum, Kang Xu and Chunsheng Wang, *Joule* (2018) <https://doi.org/10.1016/j.joule.2018.02.011>.
253. The Impact of Carbohydrate Solutes on the Ionicity of 1-Ethyl methylimidazolium Acetate Ionic Liquid Solutions, P. J. Fahey, D. P. Durkin, E. T. Fox, M. Gobet, S. G. Greenbaum, H. C. DeLong, and P. C. Trulove, *ECS Transactions*, 86 (14) 279-286 (2018).
254. "An alternative route to single ion conductivity: Self-assembly of multi-ionic salts", Sumanth Cherreddy, Parameswara Rao Chinnam, Vijay Chatare, Stephen Patrick diLuzio, Mallory P. Gobet, Steven G.

Greenbaum, and Stephanie L. Wunder, *Materials Horizons*, Mater. 2018,5, 461-473.

255. "A Carbonate-free, Sulfone-based Electrolyte for High Voltage Li-ion Batteries", Kang Xu, Minghao Zhang, Marco Olguin, Shirley Meng, Steve Greenbaum, Michael Ding, Marshall Schroeder, Oleg Borodin, Judith Alvarado, Mallory Gobet, Eric Gobrogge, *Materials Today*, 21, 341 (2018).
256. "Effect of Electron Bombardment on Polyimide Film", Daniel P. Engelhart, Elena Plis, Russell Cooper, Sunita Humagain, Andrei Koch, Matthew Brunetti, Steven Greenbaum, Ryan Hoffmann, *Key Engineering Materials*, ISSN: 1662-9795, Vol. 759, pp 48-53 (2018); doi:10.4028/www.scientific.net/KEM.759.48
257. "An Enhanced Lithium Oxygen Battery using a Glyme Electrolyte and Carbon Nanotubes", Carbone, Lorenzo; Moro, Paolo Tomislav; Gobet, Mallory; Munoz, Stephen; Devany, Matthew; Greenbaum, Steven; Hassoun, Jusef, *ACS Applied Materials and Interfaces*, 2018, 10 (19), pp 16367–16375 DOI: 10.1021/acsami.7b19544
258. "Multinuclear NMR investigation of cation-anion and anion-solvent interactions in carbonate electrolytes, "Jing Peng, Mallory Gobet, Matthew Devany, Kang Xu, Arthur von Wald Cresce, Oleg Borodin, Steven Greenbaum, *Journal of Power Sources*, 399, 215-222 (2018).
<https://doi.org/10.1016/j.jpowsour.2018.07.095>
259. "Exotic Solid State Ion Conductor from Fluorinated TiO₂ and Molten Metallic Lithium", Federico Bertasi, Gioele Pagot, Graeme Nawn, . Vezzù, Enrico Negro, Paul J. Sideris, Steven G. Greenbaum, Vito Di Noto, Hiroyuki Ohno and Bruno Scrosati, *Journal of Power Sources*, 400, 16-22 (2018).
260. "Detection of Nanoscale Structural Defects in Degraded Fe-Doped SrTiO₃ by Ultrafast Photoacoustic Waves", Ying Zhang, Onur Kurt., David Ascienzo., Qian Yang, Tony Le, Steve Greenbaum., Thorsten J. M. Bayer, Clive A. Randall, and Yuhang Ren, *Journal of Physical Chemistry C*, DOI:10.1021/acs.jpcc.8b03240
261. "Polymer Capacitor Dielectrics for High Temperature Applications", with Janet Ho, *ACS Applied Materials & Interfaces*, 2018, 10 (35), pp 29189–29218 DOI: 10.1021/acsami.8b07705.
262. "Fundamental limitations of ionic conductivity in polymerized ionic liquids", Stacy, Eric; Gainaru, Catalin; Gobet, Mallory; Wojnarowska, Zaneta; Bocharova, Vera; Greenbaum, Steven; Sokolov, Alexei, *Macromolecules*, Macromolecules, 2018, 51 (21), pp 8637–8645 DOI: 10.1021/acs.macromol.8b01221
263. "Improved Anisotropic Thermoelectric Behavior of PEDOT:PSS via Magnetophoresis", Vera A. Zarubin, Tai-De Li, Sunita Humagain, Haojie Ji, Kevin G. Yager, Steven G. Greenbaum, and Luat T. Vuong, *ACS Omega* 2018 3 (10), 12554-12561 DOI: 10.1021/acsomega.8b00999
264. "Cellulose, Cellobiose, and Glucose Cause Similar Decreases to Molar Conductivity and Drastically Different Increases to Dynamic Viscosity of 1-Ethyl-3-Methylimidazolium Acetate Based Solvents", P. J. Fahey, D. P. Durkin, E. T. Fox, M. Gobet, S. G. Greenbaum, H. C. De Long, and P. C. Trulove, *ECS Transactions*, 86 (14) 257-268 (2018).
265. "Graphene Oxide and sulfonated-derivative: proton transport properties and electrochemical behavior of Nafion-based nanocomposites", Isabella Nicotera, Cataldo Simari; Phill Stallworth; Jing Peng; Luigi Coppola; Steve Greenbaum, *Electrochimica Acta*, 297 (2018) 240-249
<https://doi.org/10.1016/j.electacta.2018.11.190>
266. "Review of Recent Nuclear Magnetic Resonance Studies of Ion Transport in Polymer Electrolytes", Stephen Munoz and Steven Greenbaum, *Membranes*, 2018, 8, 120; doi:10.3390/membranes8040120
267. D. Ascienzo, O. Kurt, S. Greenbaum, T. J. M. Bayer, R. Maier, J. J. Wang, C. A. Randall, Y. Ren, Local Structural Changes due to the Electric Field-induced Migration of Oxygen Vacancies at Fe-doped SrTiO₃ Interfaces, *Journal of the American Ceramic Society*. Volume102, Issue7 July 2019, 4353-4366

<https://doi.org/10.1111/jace.16289>

268. "Evaluation of Ion-Transport in Composite Electrolytes Comprising Active or Inert Ceramics. Case Study.", S. Menkin, M. Lifshits, Anat H. , M. Goor, R. Blanga, S. G. Greenbaum, A. Goldbourt and D. Golodnitsky, *Electrochimica Acta*, 304, 447 (2019).
269. "Ion Transport and Association Study of Glyme-Based Electrolytes with Lithium and Sodium Salts", Daniel Morales, Rose E. Ruther, Frank M. Delnick, Jagjit Nanda, and Steven Greenbaum, *Electrochimica Acta*, 304, 239-245 (2019).
270. "Alkyl chain length effects of hydroxyl-functionalized imidazolium ionic liquids in the ionothermal synthesis of LiFePO₄", Paul J. Sideris, Yueli Chen, Mallory Gobet & Steve G. Greenbaum, *Phosphorus, Sulfur, and Silicon and the Related Elements*, Volume 194, 2019, p292
doi.org/10.1080/10426507.2018.1528260
271. "Atomistic-scale simulations of the chemical dynamics of Kapton Polyimide damaged by electron beam irradiation", Ali Rahnamoun, Daniel P. Engelhart, Sunita Humagain, Elena Plis, W. Joshua Kennedy, Hilmar Koerner, Russell Cooper, Steven G. Greenbaum, Ryan Hoffmann, and Adri C.T. van Duin, *Polymer*, Volume 176, 2 August 2019, Pages 135-14 doi.org/10.1016/j.polymer.2019.05.035
272. "Evaluating the Ion Transport of 1-Ethyl-3-Methylimidazolium Acetate Solutions Containing Carbohydrate Solutes, David Durkin, Patrick Fahey, David Ruth, David Clarkson, Eric Fox, Mallory Gobet, Mounesha Garaga, Steven Greenbaum, Hugh De Long, Paul Trulove, *Journal of the Electrochemical Society*, 166 (14) H721-H729 (2019).
273. "Countersolvent Electrolytes for Lithium-Metal Batteries", Nan Piao, Xiao Ji, Hong Xu, Xiulin Fan, Long Chen, Sufu Liu, Mounesha N. Garaga, Steven G. Greenbaum, Li Wang, Chunsheng Wang, and Xiangming He, *Advanced Energy Materials* 2020, 1903568. doi.org/10.1002/aenm.201903568
274. "A Nuclear Magnetic Resonance Study of Cation and Anion Dynamics in Polymer-Ceramic Composite Solid Electrolytes", Peng, Jing; Xiao, Ye; Clarkson, David; Greenbaum, Steven; Zawodzinski, Thomas; Chen, Xi, *ACS Applied Polymer Materials*, 2020, 2, 3, 1180-1189 [10.1021/acsapm.9b01068](https://doi.org/10.1021/acsapm.9b01068)
275. "A 63 m Super-concentrated Aqueous Electrolyte for High Energy Li-ion Batteries", Long Chen, Jiaxun Zhang, Qin Li, Jenel Vatamanu, Xiao Ji, Travis P. Pollard, Chunyu Cui, Singyuk Hou, Ji Chen, Chongyin Yang, Michael S. Ding, Mounesha Garaga, Steve Greenbaum, Hung-Sui Lee, Oleg Borodin, Kang Xu, Chunsheng Wang, *ACS Energy Letters*, 2020, 5, 968–974; [doi 10.1021/acsenenergylett.0c00348](https://doi.org/10.1021/acsenenergylett.0c00348)
276. ²⁹Si solid state MAS NMR study on leaching behavior and stability of different silicate structures in the presence of CO₂, Guanhe Rim, Ariane Marchese, Phillip Stallworth, Ah-Hyung Alissa Park, Steve Greenbaum, *Chemical Engineering Journal*, 396 (2020) 125204. doi.org/10.1016/j.cej.2020.125204
277. "Multiscale and Multimodal Characterization of 2D Titanium Carbonitride MXene", Weiwei Sun, Hsiu-Wen Wang, Lukas Vlcek, Jing Peng, Alexander B. Brady, Naresh C. Osti, Eugene Mamontov, Madhusudan Tyagi, Jagjit Nanda, Steven G. Greenbaum, Paul R. C. Kent, and Michael Naguib, *Advanced Materials Interfaces* **2020**, 1902207; DOI: 10.1002/admi.201902207
278. "NMR investigations of crystalline and glassy solid electrolytes for lithium batteries: a brief review", Daniel Morales, Steve Greenbaum, *International Journal of Molecular Science*, **2020**, 21, [doi:10.3390/ijms21093402](https://doi.org/10.3390/ijms21093402).
279. "NMR Relaxometry and Diffusometry Analysis of Dynamics in Ionic Liquids and Ionogels for Use in Lithium Ion Batteries", Nishani Kanchana Jayakody, Carla C. Fraenza, Steven G. Greenbaum, David Ashby and Bruce S. Dunn, *Journal of Physical Chemistry, B* **2020** 124 (31), 6843-6856.
<https://doi.org/10.1021/acs.jpcc.0c02755>

280. "Modulation of cation diffusion by reversible supramolecular assemblies in ionic liquid based nanocomposites", Vera Bocharova, Nishani Jayakody, Jie Yang, Wei Yang, Shiwang Cheng, Steven Greenbaum, Seung Pyo Jeong, Ivan Popov, Sheng Zhao, Catalin Gainaru, Zaneta Wojnarowska, *ACS Applied Materials & Interfaces*, 2020 Jul 15;12(28):31842-31851 doi: 10.1021/acsami.0c08323.
281. "High-Temperature and High-Pressure NMR Investigations of Low Viscous Fluids Confined in Mesoporous Systems", Salim Ok, Julie Sheets, Susan A. Welch, David R. Cole, Marc Berman, Armando Rua, Steve Greenbaum, Srivastava Deepansh, Philip J. Grandinetti, *Zeitschrift für Physikalische Chemie*, <https://doi.org/10.1515/zpch-2019-1510> (2020).
282. "Bulk and Interfacial Diffusion in Anion-Substituted Nanoconfined Hydrides: LiBH₄-Li:Al₂O₃", Roman Zettl, Maria Gombotz, Ilie Hanzu, David Clarkson, Steve Greenbaum, Peter Ngene, Petra E. de Jongh, and H. Martin. R. Wilkening, *ACS Applied Materials and Interfaces*, 2020 12 38570-38583. DOI: 10.1021/acsami.0c10361
283. "Polymer/Ceramic Interface Barriers - the Key Challenge for Practical Composite Solid Electrolytes", Yonatan Horowitz, Moran Lifshitz, Anna Greenbaum, Yuri Feldman, Steve Greenbaum Alexei P. Sokolov, and Diana Golodnitsky, *Journal of the Electrochemical Society*, 167, 160514 (2020).
284. "Molecular-level insights into the structure and dynamics in ionic liquids and polymer gel electrolytes", Mounesha N. Garaga, Nishani Jayakody, Carla C. Fraenza, Boris Itin, Steven Greenbaum, *Journal of Molecular Liquids*, 329, 115454 (2021).
285. "Review of Multivalent Metal Ion Transport in Inorganic and Solid Polymer Electrolytes", L.F. O'Donnell and S.G. Greenbaum, *Batteries*, 7, 3 (2021). <https://doi.org/10.3390/batteries7010003>
286. "Hybrid Twin-Metal Aluminum-Magnesium Electrolytes for Rechargeable Batteries", Gioele Pagot, Keti Vezzù, Steve G. Greenbaum, Vito Di Noto, *Journal of Power Sources*, 493, 229681 (2021). <https://doi.org/10.1016/j.jpowsour.2021.229681>
287. "Transport studies of organic solvents-based sodium ion electrolytes", Daniel Morales, Luciana Gomes Chagas, Domenec Paterno, Steve Greenbaum, Stefano Passerini, Sophia Suarez, *Electrochimica Acta*, 377 138062 (2021).
288. "Aqueous Polymer Electrolytes for Lithium-Ion Batteries", Matthew D. Widstrom, Oleg Borodin, Kyle B. Ludwig, Jesse E. Matthews, Sahana Bhattacharyya, Arthur V. Cresce, Angelique Jarry, Metecan Erdi, Chunsheng Wang, Steven G. Greenbaum, and Peter Kofinas, *Macromolecules*, 54, 2882-2891 (2021). <https://dx.doi.org/10.1021/acs.macromol.0c01960>
289. "CO₂ Utilization in Built Environment via the PCO₂ Swing Carbonation of Alkaline Solid Wastes with Different Mineralogy", Guanhe Rim, Noyonika Roy, Diandian Zhao, Shiho Kawashima, Phillip Stallworth, Steven G. Greenbaum, and Ah-Hyung Alissa Park, *Faraday Discussions Carbon Dioxide Utilization*, in press.
290. "Examining the Impact of Polyzwitterion Chemistry on Lithium Ion Transport in Ionogel Electrolytes", Morgan E. Taylor, David Clarkson, Steven G. Greenbaum, and Matthew J. Panzer, *ACS Applied Polymer Materials*, 2021, 3, 2635-2645. doi.org/10.1021/acsapm.1c00229
291. "Nuclear Magnetic Resonance as an Analytical Tool in Battery Materials Science", Mounesha Garaga, David Clarkson, Steven Greenbaum, in Batteries: Materials Principles and Characterization Methods, Chen Liao, Ed. in press.
292. "Structural Investigation of Glass-Ceramic Lithium Thiophosphate Solid Electrolytes via NMR and Neutron Scattering", Ethan C. Self, Lauren O'Donnell, Daniel Morales, Alex Chien, Jue Liu, Teerth Brahmabhatt, Steven Greenbaum, and Jagjit Nanda, *Materials Today Physics*, 21 100478 (2021). <https://doi.org/10.1016/j.mtphys.2021.100478>

293. "Solvation Dynamics in Wet Ethaline – Is Water the Magic Component?" Ibrahim Alfurayj, Carla Cecilia Fraenza, Yong Zhang, Rathiesh Pandian, Stephanie Spittle, Bryce Hansen, William Dean, Burcu Gurkan, Robert Savinell, Steve Greenbaum, Edward Maginn, Joshua Sangoro, and Clemens Burda, *Journal of Physical Chemistry B*, 2021, 125, 31, 8888–8901. doi.org/10.1021/acs.jpcc.1c04629
294. "Copper-coordinated cellulose ion conductors for solid-state batteries", Chunpeng Yang, Qisheng Wu, Weiqi Xie, Xin Zhang, Alexandra Brozena, Jin Zheng, Mounesha N. Garaga, Byung Hee Ko, Yimin Mao, Shuaiming He, Yue Gao, Pengbo Wang, Madhusudan Tyagi, Feng Jiao, Robert Briber, Paul Albertus, Chunsheng Wang, Steven Greenbaum, Yan-Yan Hu, Akira Isogai, Martin Winter, Kang Xu, Yue Qi, Liangbing Hu, *Nature* volume 598, pages 590–596 (2021) <https://doi.org/10.1038/s41586-021-03885-6>
295. "Plasticized 3D-Printed Polymer Electrolytes for Lithium-ion Batteries", Adi Vinegrad, Heftsi Ragones, Nishani Jayakody, Gilat Ardel, Meital Goor, Yossi Kamir, Moty Marcos Dorfman, Alexander Gladkikh, Larisa Burstein, Yonatan Horowitz, Steve Greenbaum, and Diana Golodnitsky, *Journal of the Electrochemical Society*, 168, 110549 (2021). <https://doi.org/10.1149/1945-7111/ac39d5>
296. "Correlating Microscopic Heterogeneity and Dynamics in Deep Eutectic Solvents: Case Study of Choline Chloride-Glycerol Mixtures", Spittle, Stephanie; Poe, Derrick ; Doherty, Brian; Kolodziej, Charles; Heroux, Luke; Haque, MD Ashraful; Squire, Henry; Cosby, Tyler; Zhang, Yong; Fraenza, Carla; Battacharyya, Sahana; Peng, Jing; Greenbaum, Steve; Elgammal, Ramez; Zawodzinski, Thomas; Tuckerman, Mark; Gurkan, Burcu; Burda, Clemens; Dadmun, Mark; Maginn, Edward; Sangoro, Joshua, *Nature Communications*. <https://doi.org/10.1038/s41467-021-27842-z>
297. "Glyme-based Electrolytes for Next-Generation Lithium Battery", Daniele Di Lecce, Vittorio Marangon, Hun-Gi Jung, Yoichi Tominaga, Steve Greenbaum, Jusef Hassoun, *Green Chemistry*, 2022, 24, 1021-1048 DOI: 10.1039/d1gc03996b
298. "Dynamics of Glyceline and Interactions of Constituents: A Multi-technique NMR study", Carla Fraenza, Ramez Elgammal, Mounesha Garaga, Thomas Zawodzinski and Steven Greenbaum, *Journal of Physical Chemistry B*, 2022, 126, 4, 890–905 <https://doi.org/10.1021/acs.jpcc.1c09227>
299. "Novel Nanoscale Hybrid Electrolytes with Viscosity controlled using Ionic Stimulus for Electrochemical Energy Conversion and Storage", Sara T. Hamilton, Tony G. Feric, Sahana Bhattacharyya, Nelly M. Cantillo, Steven G. Greenbaum, Thomas A. Zawodzinski, and Ah-Hyung Alissa Park, *JACS Au*, doi:10.1021/jacsau.1c00410.
300. "Interplay between Coordination, Dynamics, and Conductivity Mechanism in Catenated Ionic Liquid Electrolytes", Gioele Pagot, Mounesha Garaga, Ankur Jadhav, Lauren F. O'Donnell, Ketì Vezzù, Boris Itin, Robert J. Messinger, Enrico Negro, Steve G. Greenbaum, and Vito Di Noto *Journal of Power Sources*, Volume 524, 15 March 2022, 231084 doi.org/10.1016/j.jpowsour.2022.231084.
301. "A high-performance hydroxide exchange membrane enabled by Cu²⁺-crosslinked chitosan", Meiling Wu, Xin Zhang, Yun Zhao, Chunpeng Yang, Shuangshuang Jing, Qisheng Wu, Alexandra Brozena, Jeffrey T. Miller, Nicole LiBretto, Tianpin Wu, Sahana Bhattacharyya, Mounesha Garaga, Yue Qi, Steven G. Greenbaum, Robert M. Briber, Yushan Yan, Liangbing Hu, *Nature Nanotechnology* <https://doi.org/10.1038/s41565-022-01112-5>
302. "Electrical Field Driven Structural Evolutions of Polymorphic Nanodomains in Ferroelectric Ba(Zr,Ti)O₃ Films", Yuhang Ren, Onur Kurt, Hongbo Cheng, Tong Le, Steve Greenbaum, and Jun Ouyang, *Advanced Electronic Materials*, in press. <https://doi.org/10.1002/aelm.202200465>
303. "Broadband NMR relaxometry of electrolytes for energy storage", Carla Fraenza, Steve Greenbaum, *Chemical Physics Reviews*, 3, 011307 (2022); doi:10.1063/5.0076580
304. "Acid-in-clay electrolyte for wide-temperature-range and long-cycle proton batteries", Shitong Wang,

Heng Jiang, Yanhao Dong, David Clarkson, He Zhu, Charles M. Settens, Yang Ren, Thanh Nguyen, Fei Han, Weiwei Fan, So Yeon Kim, Jianan Zhang, Weijiang Xue, Sean K. Sandstrom, Guiyin Xu, Emre Tekoglu, Mingda Li, Sili Deng, Qi Liu, Steven G. Greenbaum, Xiulei Ji, Tao Gao, and Ju Li, *Advanced Materials*, DOI: 10.1002/adma.202202063

305. "A Sobering Examination of the Feasibility of Aqueous Aluminum Batteries", Glenn R. Pastel, Ying Chen, Travis P. Pollard, Marshall A. Schroeder, Mark Bowden, Allen Zheng, Nathan Hahn, Lin Ma, Michael Ding, Vijayakumar Murugesan, Janet Ho, Mounesha Garaga, Oleg Borodin, Karl Mueller, Steven Greenbaum, and Kang Xu. *Energy and Environmental Science*, 15, 2460 (2022).
306. "Quantifying Lithium Ions Exchanged in Solid Electrolyte Interphase (SEI) on Graphite Anode Half Cells", Janet S. Ho, Zihua Zhu, Philip Stallworth, Steve G. Greenbaum, Sheng S. Zhang, and Kang Xu, *Inorganics* (MDPI), 2022, 10, 64. <https://doi.org/10.3390/inorganics10050064>
307. "Lithium Solvation and Mobility in Ionic Liquid Electrolytes with Asymmetric Sulfonyl-Cyano Anion", Drace Penley, Xiaoyu Wang, Yun-Yang Lee, Mounesha N Garaga, Raziye Ghahremani, Steve Greenbaum, Edward J. Maginn, Burcu Gurkan, *Journal of Chemical & Engineering Data*, 2022, 67, 1810–1823. <https://doi.org/10.1021/acs.jced.2c00294>
308. "Thermal and concentration effects on 1H NMR relaxation of Gd³⁺-aqua using MD simulations and measurements", Thiago J. Pinheiro dos Santos, Arjun Valiya Parambathu, Carla C. Fraenza, Casey Walsh, Walter G. Chapman, Steve G. Greenbaum, Dilip Asthagiri, and Philip M. Singer, *Physical Chemistry Chemical Physics*, DOI: 10.1039/d2cp04390d.
309. "Mechanochemical Synthesis of LAGP/PEG Hybrid Solid Electrolyte: Investigation of Surface Structure and Chemistry" Deiner, Clarkson, etc, *Solid State Ionics*, submitted.
310. "Strengthening Aqueous Electrolytes without Strengthening Water", Longteng Tang, Weiyi Zhang, Yunkai Xu, Alexis Scida, Sean R. Tachibana, Mounesha Garaga, Yiming Sui, Sean K. Sandstrom, Steve G. Greenbaum, Peter Alex Greaney, Chong Fang, Xiulei Ji, *Proceedings of the National Academy of Sciences*, submitted.
311. "NMR Investigation of Proton Transport in Polybenzimidazole/Polyphosphoric Acid Membranes Prepared Via Novel Synthesis Route", Mounesha N. Garaga, Laura Murdock, Tawhid Pranto, Sophia Suarez, Brian C. Benicewicz, Steven G. Greenbaum, *Journal of the Electrochemical Society*, submitted
312. "Assessment of Phase Content in Uniaxial and Biaxial Stretched Poly(vinylidene fluoride) through ¹H and ¹⁹F NMR", P. E. Stallworth, N. Jayakody, J. R. P. Jayakody, Y. Li, S. G. Greenbaum, and L. Zhu, *Macromolecules*, submitted.