

List of Publications Shulamith Schlick

1. **Schlick, S.; Levy, M.** Block-polymers of Styrene and Isoprene with Variable Distribution of Monomers Along the Polymeric Chain. Synthesis and Properties, *J. Phys. Chem.* **1960**, *64*, 883-886.
2. **Schlick, S.; Schnepf, O.** Infrared Spectrum of Lithium Fluoride in Inert Gas Matrices, *Bull. Res. Council. Israel* **1962**, *11*, A3, 230.
3. **Schlick, S.; Schnepf, O.** Infrared Spectra of Lithium Halide Molecular Species, *Israel J. Chem.* **1963**, *1*, 274.
4. **Schlick, S.; Schnepf, O.** Infrared Spectra of the Lithium Halide Monomers and Dimers in Inert Matrices at Low Temperature, *J. Chem. Phys.* **1964**, *41*, 463-472.
5. **Heller, H.C.; Schlick, S.; Cole, T.** Selective Formation of Radicals in Organic Solids by Abstraction and Addition of Hydrogen Atoms, *J. Phys. Chem.* **1967**, *71*, 97-103.
6. **Schlick, S.; Cole, T.; Heller, H.C.** On the Apparent Reaction of Excited Inert Gas Atoms with Organic Solids, *J. Chem. Phys.* **1967**, *47*, 1874-1874.
7. **Heller, H.C.; Schlick, S.; Yao, Y.C.; Cole, T.** Reactions of Solid Barium Methacrylate Dihydrate Induced by Hydrogen and Deuterium Atom Bombardment, In *Organic Solid State Chemistry Symposium*; Adler, G., Ed.; Gordon & Breach, 1969; Chapter 22, pp 401-415.
8. **Schlick, S.; Silver, B.L.; Luz, Z.** ^{17}O Hyperfine Splitting in the ESR Spectra of PO_3^- Radicals Trapped in Sodium Phosphite Pentahydrate, *J. Chem. Phys.* **1968**, *49*, 4236-4237.
9. **Schlick, S.; Silver, B.L.; Luz, Z.** ^{17}O Hyperfine Splitting of the PO_3^- Radical Trapped in a Single Crystal of $\text{Na}_2\text{DPO}_3 \cdot 5\text{D}_2\text{O}$, *Israel J. Chem.* **1968**, *6*, 56p.
10. **Schlick, S.; Silver, B.L.; Peller, S.; Luz, Z.** Hyperfine Splitting in the ESR Spectra of Radicals Trapped in Solids, In *Proceedings XV Colloque AMPERE* **1968**, 343.
11. **Schlick, S.; Silver, B.L.; Luz, Z.** ESR of ^{17}O -Labelled PO_3^- Ion Trapped in a Single Crystal of $\text{Na}_2\text{DPO}_3 \cdot 5\text{D}_2\text{O}$, *J. Chem. Phys.* **1970**, *52*, 1232-1237.
12. **Schlick, S.** Identification of the O_3^- Radical in X-irradiated KClO_3 , *Chem. Phys. Lett.* **1969**, *4*, 421-422.
13. **Silver, B.L.; Schlick, S.; Luz, Z.** ESR Spectrum of ^{17}O Enriched CO_2^- Trapped in a Single Crystal of Sodium Formate, *Israel J. Chem.* **1969**, *7*, 49p.
14. **Luz, Z.; Schlick, S.; Silver, B.L.** ESR of ^{17}O -Labelled CO_2^- Radical Trapped in a Single Crystal of Sodium Formate, *J. Chem. Phys.* **1971**, *54*, 867-871.
15. **Schlick, S.** ESR Spectrum of O_3^- Trapped in a Single Crystal of Potassium Chlorate, *J. Chem. Phys.* **1972**, *56*, 654-661.
16. **Silver, B.L.; Koresh, J.; Schlick, S.; Luz, Z.** ESR Study of NO_2 in X-irradiated Sodium Nitrate ^{17}O , *Mol. Phys.* **1971**, *22*, 225-231.
17. **Bar-Adon, R.; Schlick, S.; Silver, B.L.; Ginsburg, D.** Propellanes XVII. A Propellane Free Radical, *Tetrahedron Letters* **1972**, *4*, 325-326.
18. **Melamud, E.; Getz, D.; Schlick, S.; Silver, B.L.** The H_3O Radical?, *Chem. Phys. Lett.* **1972**, *15*, 590-591.

19. **Schlick, S.; Silver, B.L.** ESR of Cl^{17}O_2 , *Mol. Phys.* **1973**, *16*, 177-182.
20. **Melamud, E.; Schlick, S.; Silver, B.L.** ESR of Tetralin Peroxy- ^{17}O Radical in a Single Crystal, *J. Magn. Reson.* **1974**, *14*, 104-111.
21. **Schlick, S.; Getz, D.; Silver, B.L.** ESR of Cu(II) in Powders and Single Crystals of Dibarium Zinc Formate Tetrahydrate, *Chem. Phys. Lett.* **1975**, *31*, 555-558.
22. **Schlick, S.; Kevan, L.** Spin Trapping of Radicals Formed in Gamma-irradiated Methanol: Effect of the Irradiation Temperature from 77K to 300K, *Chem. Phys. Lett.* **1976**, *38*, 505-509.
23. **Schlick, S.; Kevan, L.** Hydrogen Spin Flip Satellite Lines Associated with the PO_3^{2-} Radical in a Single Crystal of $\text{Na}_2\text{HPO}_3 \cdot 5\text{H}_2\text{O}$: Calculated and Experimental Intensities, *J. Magn. Reson.* **1976**, *21*, 129-133.
24. **Schlick, S.; Kevan, L.** The Application of Differential Saturation to Distinguish Intramolecular and Lattice-induced Mechanisms of Spin Lattice Relaxation, *J. Magn. Reson.* **1976**, *22*, 171-181.
25. **Bar-Adon, R.; Schlick, S.; Gilboa, H.; Silver, B.L.** Molecular Motion in a Solid Propellane, *J. Magn. Reson.* **1976**, *22*, 41-46.
26. **Schlick, S.; Narayana, P.A.; Kevan, L.** ESR Lineshape Studies of Trapped Electrons in Gamma-irradiated O^{17} -Enriched 10M NaOH Alkaline Ice Glass: Model for the Geometrical Structure of the Trapped Electron, *J. Chem. Phys.* **1976**, *64*, 3153-3160.
27. **Schlick, S.; Kevan, L.** Confirmation of O^\cdot Formation in Gamma-Irradiated 10M NaOH/ H_2^{17}O Alkaline Ice Glass by Electron Paramagnetic Resonance Studies, *J. Phys. Chem.* **1977**, *81*, 1093-1095.
28. **Schlick, S.; Narayana, P.A.; Kevan, L.** Matrix ENDOR Studies of the Proton Environment of the Radical in Natural and Solvent-refined Coal, *J. Am. Chem. Soc.* **1978**, *100*, 3322-3326.
29. **Schlick, S.; Kevan, L.** Study of g-Anisotropy Associated with Molecular Motion in the Triphenylmethyl Peroxy Radical: An Environmental Probe, *J. Phys. Chem.* **1979**, *83*, 3424-3429.
30. **Schlick, S.; Kevan, L.** Interpretation of the ESR Spectrum from a Mobile Peroxide on a MgO Surface, *J. Chem. Phys.* **1980**, *72*, 784-785.
31. **Kevan, L.; Schlick, S.; Toriyama, K.; Iwasaki, M.** Matrix ENDOR of the Protonated Carboxylic Anion Radical in Gamma-irradiated L-alanine: Simulation Using a General Matrix ENDOR Lineshape Model and Single Crystal Data, *J. Phys. Chem.* **1980**, *84*, 1950-1954.
32. **Schlick, S.; Kevan, L.** Interpretation of Temperature Dependent ESR Spectra of Peroxy Polyethylene Radicals in Urea-polyethylene Complex, *J. Am. Chem. Soc.* **1980**, *102*, 4622-4626.
33. **Schlick, S.; Kevan, L.; Toriyama, K.; Iwasaki, M.** The Importance of Nuclear Spin Diffusion as an Angularly Independent Relaxation Mechanism Controlling the Matrix ENDOR Response of Radicals in Molecular Crystals, *J. Chem. Phys.* **1981**, *74*, 282-287.
34. **Kevan, L.; Schlick, S.; Narayana, P.A.; Feng, D.F.** Application of the Semicontinuum Potential Model to Deduce Localized Electron Trapping Sites in Single Crystals of d-sorbitol, *J. Chem. Phys.* **1981**, *75*, 1980-1983.
35. **Schlick, S.; Kevan, L.** Study of X-irradiated Lithographic Polymers by Electron Spin Resonance and Electron-

- Nuclear Double Resonance, *J. Appl. Polymer Sci.* **1982**, *27*, 319-326.
36. **Suryanayana, D.; Kevan, L.; Schlick, S.** Peroxy Radical Probe for Motion in Polytetrafluoroethylene Chains, *J. Am. Chem. Soc.* **1982**, *104*, 668-673.
 37. **Narayana, M.; Kevan, L.; Schlick, S.** Electron Spin Echo Studies of the Displacement of the Methyl Radicals in X-irradiated Lithium Acetate Dihydrate, *J. Phys. Chem.* **1982**, *86*, 196-200.
 38. **McGarvey, B.R.; Schlick, S.** Study of Molecular Motion in Polysilastylene by Pulsed ^1H Nuclear Magnetic Resonance, *J. Polymer Sci., Phys. Ed.* **1982**, *20*, 2145-2152.
 39. **Schlick, S.; McGarvey, B.R.** Motion of Mid-chain Peroxy Radicals in Poly(tetrafluoroethylene), *J. Phys. Chem.* **1983**, *87*, 352-353.
 40. **Schlick, S.; Narayana, M.; Kevan, L.** Proton Environment of Paramagnetic Centers in Natural and Solvent Refined Bituminous Coal by Multifrequency Electron Spin Resonance and Electron Spin Echo Modulation Spectrometry, *Fuel* **1983**, *62*, 1250-1254.
 41. ***Schlick, S.; Kevan, L.** Study of Paramagnetic Centers in Natural and Solvent Refined Coal by Multi-frequency ESR, ENDOR and ESE Modulation Spectroscopy; In *Magnetic Resonance Techniques in Fossil Energy Problems*; Fraissard, J.; Petrakis, L. Eds.; NATO ASI Series, Reidel: Dordrecht, 1984; pp 655-665.
 42. **McGarvey, B.R.; Schlick, S.** Pulsed NMR Study of ^1H and ^{19}F Spin Lattice Relaxation and Cross Relaxation in Poly(vinylidene fluoride), *Macromolecules* **1984**, *17*, 2392-2399.
 43. **Schlick, S.; McGarvey, B.R.** Study of Dynamics in Poly(*p*-phenylene sulfide) by Pulsed ^1H Nuclear Magnetic Resonance, *Polymer Commun.* **1984**, *25*, 369-373.
 44. **Rex, G.C.; Schlick, S.** Binding of Cu^{2+} in Polyacrylamide Gels. An Electron Spin Resonance Study, *J. Phys. Chem.* **1985**, *89*, 3598-3601.
 45. **Schlick, S.; Chamulitrat, S.; Kevan, L.** Electron Spin Resonance Study of Peroxy Labels in a Copolymer of Tetrafluoroethylene-Hexafluoropropylene (FEP), *J. Phys. Chem.* **1985**, *89*, 4278-4282.
 46. **Schlick, S.** Binding Sites of Cu^{2+} in Chitin and Chitosan. An ESR Study, *Macromolecules* **1986**, *19*, 192-195.
 47. **Schlick, S.; Narayana, M.; Kevan, L.** Selective Study of Paramagnetic Centers in Coals by ESR and ESE Spectrometry, *Fuel* **1986**, *64*, 873-876.
 48. **Alonso-Amigo, M.G.; Schlick, S.** ESR Study of Cu^{2+} in Nafion Ionomers, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1986**, *27*, 337-338.
 49. **Rex, G.C.; Schlick, S.** ESR Study of Cu^{2+} Bonding in Swollen Crosslinked Polyacrylamide Gels, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1986**, *27*, 339-340.
 50. ***Kevan, L.; Schlick, S.** Peroxy Spin Probes as Motional Probes in Polymers and on Oxide Surfaces, *J. Phys. Chem.* **1986**, *90*, 1998-2007 (Feature Article).
 51. **Alonso-Amigo, M.G.; Schlick, S.** Detection of Isolated and Paired Cu^{2+} Ions in Nafion Membranes by ESR Spectroscopy, *J. Phys. Chem.* **1986**, *90*, 6353-6362.
 52. **Becker, D.; Yanez, J.; Sevilla, M.D.; Alonso-Amigo, M.G.; Schlick, S.** An ESR Investigation of the Motion of Lipid Peroxyl Radicals, *J. Phys. Chem.* **1987**, *91*, 492-496.

53. ***Rex, G.C.; Schlick, S.** Study of Polymer Networks Using Paramagnetic Probes. Cu(II) in Crosslinked Polyacrylamide Gels; In *Reversible Polymeric Gels and Related Systems*; Russo, P.S., Ed.; ACS Symposium Series 350: Washington, D.C. 1987; Chapter 19, pp 265-281.
54. **Alonso-Amigo, M.G.; Schlick, S.** Study of Mobile and Rigid Peroxy Radicals in Polypropylene, *Macromolecules* **1987**, *20*, 795-801.
55. **Schlick, S.; Harvey, R.D.; Kusters, J.; Omoto, M.; Klempner, D.** Study of Morphology in IPNs Using Spin Probes, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1987**, *28*, 167-168.
56. **Alonso-Amigo, M.G.; Schlick, S.** Detection of Isolated, Paired and Clustered Ti³⁺ in Nafion by ESR Spectroscopy, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1987**, *28*, 363-364.
57. **Schlick, S.** Study of Dynamics and Spin Lattice Relaxation Mechanism in the Triphenyl-methylperoxy Radical Using Peroxy Spin Probes, *Radiat. Phys. Chem.* **1987**, *30*, 33-38.
58. **Schlick, S.; Alonso-Amigo, M.G.** Binding of Paramagnetic Cu²⁺ and Ti³⁺ in Nafion Membranes, *J. Chem. Soc., Faraday Trans.* **1987**, *83*, 3575-3586.
59. **Rex, G.C.; Schlick, S.** Study of Polymer Gels Using Paramagnetic Probes. ESR Spectra of Cu²⁺ in Reversible Polyacrylamide Gels, *Polymer* **1987**, *28*, 2134-2138.
60. **Schlick, S.; Sjoqvist, L.; Lund, A.** ENDOR from Paramagnetic Centers in Ionomers. Ti(III) in Nafion, *Macromolecules* **1988**, *21*, 535-537.
61. **Schlick, S.** L, S and X Band ESR, ENDOR and ESE of Cu²⁺ and Ti³⁺ in Perfluorinated Ionomers, In *Proceedings XXIV Congress AMPERE*, 1988, C-79.
62. ***Schlick, S.** ESR Study of Cu(II) in Polyacrylamide Networks, In *Proceedings of the NATO Advanced Study Institute on Physicochemical Hydrodynamics: Interfacial Phenomena* Velarde, M.; Nichols, B., Eds.; Plenum: New York, 1988; Vol. 2, Chapter F7, pp 881-895.
63. ***Schlick, S.; Kevan, L.** Continuous Wave and Pulsed Electron Spin Resonance Spectroscopy; In *Spectroscopic Analysis of Coal Liquids*; Kershaw, J. Ed.; Elsevier: Amsterdam, 1989, Chapter 9, pp 267-305.
64. ***Lund, A.; Schlick, S.** Trapped Electrons in Organic Crystals, *Rev. Chem. Intermediates* **1989**, *11*, 37-66.
65. **Harvey, R.D.; Schlick, S.** Study of Morphology in IPNs Using Paramagnetic Spin Probes, *Polymer* **1989**, *30*, 11-16.
66. **Schlick, S.; Harvey, R.D.; Alonso-Amigo, M.G.; Klempner, D.** Study of Phase Separation in IPNs Using Nitroxide Spin Labels, *Macromolecules* **1989**, *22*, 822-830.
67. **Alonso-Amigo, M.G.; Schlick, S.** Determination of the Distance Between Paramagnetic Centers from ESR Spectra at L, S and X bands. Cu²⁺ in Nafion Ionomers, *Macromolecules* **1989**, *22*, 2628-2634.
68. **Schlick, S.; Alonso-Amigo, M.G.** Local Environment and Clustering of Cations in Ionomers. ESR of Cu²⁺ in Nafion Swollen by Water, Methanol, Dimethylformamide and Tetrahydrofuran, *Macromolecules* **1989**, *22*, 2634-2641.
69. **Schlick, S.; Alonso-Amigo, M.G.** Co-Cation Enhanced Electron Transfer in Nafion Neutralized by Ti³⁺, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1989**, *30*, 440-441.
70. **Lee, K.H.; Schlick, S.** Nitroxide Probes of the Local Environment in Nafion Ionomers, *Polym. Prepr. (Am.*

- Chem. Soc. Div. Polym. Chem.*) **1989**, *30*, 302-303.
71. **Schlick, S.; Alonso-Amigo, M.G.; Eaton, S.S.** Structure of Cu^{2+} - Cu^{2+} Dimers in Nafion Swollen by Water, Methanol, DMF and THF. ESR Results and Theoretical Simulations, *J. Phys. Chem.* **1989**, *93*, 7906-7912.
 72. **Alonso-Amigo, M.G.; Schlick, S.** Superoxide Formation in Nafion by Electron Transfer from Ti^{3+} . The Effect of Al^{3+} as Co-Cation, *J. Phys. Chem.* **1989**, *93*, 7526-7528.
 73. **Chen, W.P.; Schlick, S.** Study of Phase Separation in Polyurethanes Using Paramagnetic Labels. Effect of Soft Segment Molecular Weight and Temperature, *Polymer* **1990**, *31*, 308-314.
 74. ***Schlick, S.** Multifrequency ESR and ENDOR Studies of Ionomers, *Makromol. Chem., Macromol. Symp.* **1990**, *34*, 309-324.
 75. **Bednarek, J.; Schlick, S.** Local Environment of Cations and Ionomer Morphology from ^{14}N Superhyperfine Interaction. ESR of Cu^{2+} Nafion/Acetonitrile, *J. Am. Chem. Soc.* **1990**, *112*, 5019-5024.
 76. **Schlick, S.; Gebel, G.; Pineri, M.; Volino, F.** Study of Nafion Membranes and Solutions Using ^{19}F NMR Spectroscopy, *Macromolecules* **1991**, *24*, 3517-3521.
 77. **Bednarek, J.; Schlick, S.** Cation Solvation in Nafion/ Cu^{2+} Swollen by Acetonitrile from Multifrequency ESR and Simulations, *J. Am. Chem. Soc.* **1991**, *113*, 3303-3309.
 78. **Bednarek, J.; Schlick, S.** Stability of Radical Intermediates in Microscopically Heterogeneous Media. Photolysis of Water Adsorbed on Silica Gel, by ESR and DSC, *J. Phys. Chem.* **1991**, *95*, 9940-9944.
 79. **Bednarek, J.; Erickson, R.; Lund, A.; Schlick, S.** The Return of the Trapped Electron In X-Irradiated Clathrate Hydrates. An ESR Study, *J. Am. Chem. Soc.* **1991**, *113*, 8990-8991.
 80. **Rex, G.C.; Schlick, S.** Study of Polymer Networks Using Paramagnetic Probes. Vanadyl in Chemically Crosslinked Polyacrylamide, *Polymer* **1992**, *33*, 2036-2042.
 81. **Bednarek, J.; Schlick, S.** An ESR Probe for the Solvation of Ionomer Membranes and Other Microscopically Heterogeneous Systems. Cu^{2+} in Nafion, Sephadex and Silica Gel, *Langmuir* **1992**, *8*, 249-253.
 82. **Schlick, S.; Luz, Z.; Poupko, R.; Zimmermann, H.** Cope Rearrangement and Molecular Reorientation in Solid Bullvalene: A Single Crystal Deuterium NMR Study, *J. Am. Chem. Soc.* **1992**, *114*, 4315-4320.
 83. **Schlick, S.; Myers, B.E.; Sjoqvist, L.; Lund, A.** ESR and ENDOR of Ti^{3+} in Methanol Solutions and in Perfluorinated Ionomers Swollen by Water and Methanol, *Z. Naturforsch.* **1992**, *47a*, 702-712.
 84. **Maiti, B.; Schlick, S.** Oxygen Diffusion in Perfluorinated Ionomers Based on the Reaction with the Methyl Viologen Cation Radical. An ESR and UV/Visible Study, *Chem. Mater.* **1992**, *4*, 458-462.
 85. **Muller, G.; Stadler, R.; Schlick, S.** An ESR Study of the Local Heterogeneity in Miscible Blends of Polystyrene and Poly(vinyl methyl ether), *Makromol. Chem., Rapid Commun.* **1992**, *13*, 117-124.
 86. **Xue, H.; Schlick, S.** Ionic Clustering in Amine-Capped Telechelic Ionomers from ESR of Cupric Complexes, *Macromolecules* **1992**, *25*, 4437-4441.
 87. **Lossia, S.A.; Flore, S.G.; Nimmala, S.; Li, H.; Schlick, S.** ESR of AOT Reverse Micelles. Location of Cation Guests and Comparison with Perfluorinated Ionomers, *J. Phys. Chem.* **1992**, *96*, 6071-6075.
 88. **Muller, G.; Stadler, R.; Schlick, S.** Probing the Local Heterogeneity in Miscible Blends and Semi-IPNs of

- Polystyrene and Poly(vinyl methyl ether) by ESR, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1992**, *33*, 547-548.
89. **Pilar, J.; Labsky, J.; Sikora, A.; Schlick, S.** Morphology of Poly(styrene-co-acrylic acid)/ Poly(ethylene oxide) Blends by Spin Label EPR and DSC, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1992**, *33*, 559-560.
 90. ***Schlick, S.; Alonso-Amigo, M.G.; Bednarek, J.** Multifrequency ESR and ENDOR of Metal Cations in Perfluorinated Ionomers, *Colloids Surf. A: Physicochem. Eng. Aspects* **1993**, *72*, 1-9.
 91. **Pilar, J.; Sikora, A.; Labsky, J.; Schlick, S.**, Phase Structure of Poly(styrene-co-acrylic acid)/Poly(ethylene oxide) Blends by Spin Label EPR and DSC, *Macromolecules* **1993**, *26*, 137-143.
 92. **Schlick, S.; Gebel, G.; Pineri, M.; Rius, G.; Volino, F.** ESR and ENDOR of Cu²⁺ in Nafion Solutions and in Reconstituted Membranes, *Colloids Surf. A: Physicochem. Eng. Aspects* **1993**, *78*, 181-188.
 93. ***Schlick, S.** Application of ESR Spectroscopy at Sub-9 GHz Microwave Frequencies to Polymeric Systems. Advantages and Prospects, *Proc. Int. 5th Beijing Conf. Exhib. Instrum. Analysis* **1993**, *E*, 17-18.
 94. **Xue, H.; Bhowmik, P.; Schlick, S.** Direct Detection of Ionic Clustering in Telechelic Ionomers by DSC and ESR, *Macromolecules* **1993**, *26*, 3340-3343.
 95. **Xue, H.; Bhowmik, P.; Schlick, S.** Reversible Ionic Clustering in Telechelic Ionomers by DSC and ESR, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1993**, *34*, 546-547.
 96. **Avalos, J.; Gebel, G.; Pineri, M.; Schlick, S.; Volino, F.** Comparative Study of Perfluorinated Ionomers with Short and Long Pendant Chains by ¹⁹F NMR, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1993**, *34*, 448-449.
 97. **Li, H.; Schlick, S.** Structure and Dynamics of Perfluorinated Ionomers Using Paramagnetic Cations: ESR of VO²⁺ in Swollen Membranes and in Ionomer Solutions, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1993**, *34*, 446-447.
 98. **Schlick, S.** Women in Science 93. A Female Style, *Science* **1993**, *261*, 411.
 99. **Dyrek, K.; Kruczala, K.; Sojka, Z.; Schlick, S.** Catalysis on Polymer Supports. ESR of Mo(V) Dispersed in Poly(acrylic acid) Matrices, *J. Phys. Chem.* **1993**, *97*, 9196-9200.
 100. ***Stepanek, P.; Schlick, S.** Conference Report on the 33rd Microsymposium on Macromolecules: Optics and Dynamics of Polymers, *TRIP* **1993**, *1*, 365.
 101. **Muller, G.; Stadler, R.; Schlick, S.** An ESR Study of the Local Structure and Dynamics in Poly(styrene-co-maleic anhydride)/Poly(methyl vinyl ether) Blends and Semi-IPNs, *Macromolecules* **1994**, *27*, 1555-1561.
 102. **Szajdzinska-Pietek, E.; Schlick, S.; Plonka, A.** Self-Assembling of Perfluorinated Polymeric Surfactants in Water. ESR Spectra of Nitroxide Spin Probes in Nafion Solutions. *Langmuir* **1994**, *10*, 1101-1109.
 103. ***Kweon, S.-C.; Gao, Z.; Eagle, P.; Schlick, S.; Labsky, J.; Pilar, J.** Materials Imaging by ESR (ESRI): Diffusion Imaging of Small Molecules and Polymers in Polymer Solutions, *Polym. Mat. Sci. Eng. (Proc. ACS Div. PMSE)* **1994**, *71*, 169-170.
 104. ***Schlick, S.; Szajdzinska-Pietek, E.; Gebel, G.** ESR and NMR Studies of Perfluorinated Ionomers, as Membranes and in Aqueous and Nonaqueous Solvents, *Polym. Mat. Sci. Eng. (Proc. ACS Div. PMSE)* **1994**, *71*, 352-353.

105. **Szajdzinska-Pietek, E.; Schlick, S.; Plonka, A.** Self-Assembling of Perfluorinated Polymeric Surfactants in Nonaqueous Solvents. ESR Spectra of Nitroxide Spin Probes in Nafion Solutions. *Langmuir* **1994**, *10*, 2188-2196.
106. **Abetz, V.; Muller, G.; Stadler, R.; Schlick, S.** The Glass Transition of Mixtures of Polystyrene with Alkyl-Terminated Oligostyrene. Experimental Evidence for Microphase Separation in a Polymer Blend, *Macromol. Chem. Phys.* **1995**, *196*, 3845-3855. Correction in *Macromol. Chem. Phys.* **1997**, *198*, 2333.
107. **Li, H.; Schlick, S.** The Effect of Solvents on the Structure and Dynamics of Perfluorinated Ionomers, from ESR Spectra of Paramagnetic VO²⁺ Cations in Swollen Membranes and Solutions, *Polymer* **1995**, *36*, 1141-1146.
108. **Szajdzinska-Pietek, E.; Pilar, J.; Schlick, S.** Structure and Dynamics of Perfluorinated Ionomers in Aqueous Solutions and Swollen Membranes, Based on Simulations of ESR Spectra From Spin Probes, *J. Phys. Chem.* **1995**, *99*, 313-319.
109. **Xue, H.; Xu, S.; Bhowmik, P.; Schlick, S.** Effect of Oxygen and Zn²⁺ on the Thermal Transitions and Cu²⁺ Complexation in Amine-terminated Telechelic Polybutadiene: DSC and ESR Studies, *Macromolecules* **1995**, *28*, 3351-5788.
110. **Schlick, S.; Pilar, J.; Kweon, S.-C.; Vacik, J.; Gao, Z.; Labsky, J.** Measurements of Diffusion Processes in HEMA-DEGMA Hydrogels by ESR Imaging, *Macromolecules* **1995**, *28*, 5780-5788.
111. ***Ristori, S.; Martini, G.; Schlick, S.** Paramagnetic Probes for the Investigation of Ordered and Disordered Perfluorosurfactants, Perfluoropolyethers and Perfluorinated Polymers, *Adv. Colloids Interface Sci.* **1995**, *57*, 65-122.
112. **Pilar, J.; Labsky, J.; Schlick, S.** ESR of Soluble Nafion and Nafion Membranes SpinBLabelled via the Ionic Bond, *J. Phys. Chem.* **1995**, *99*, 12947-12951.
113. ***Ionomers: Characterization, Theory, and Applications**, Schlick, S., Ed.; CRC Press: Boca Raton, FL, 1996, 300 pages.
114. ***Schlick, S.** Ionomers - An Overview, In *Ionomers: Characterization, Theory, and Applications*, Schlick, S., Ed.; CRC Press: Boca Raton, FL, 1996; Chapter 1, pp 1-5.
115. ***Szajdzinska-Pietek, E.; Schlick, S.** ESR Spectroscopy of Perfluorinated Ionomers as Swollen Membranes and Solutions, In *Ionomers: Characterization, Theory, and Applications*, Schlick, S., Ed.; CRC Press: Boca Raton, FL, 1996; Chapter 7, pp 135-163.
116. ***Gebel, G.; Schlick, S.** NMR Spectroscopy of Bulk Perfluorinated Ionomers and Solutions: Information on Structure and Dynamics, In *Ionomers: Characterization, Theory, and Applications*, Schlick, S., Ed.; CRC Press: Boca Raton, FL, 1996; Chapter 8, pp 165-186.
117. ***Dyrek, K.; Bortel, E.; Schlick, S.** Catalysis on Polymer Supports, *Acta Polymerica* **1996**, *47*, 1-15.
118. **Kruczala, K.; Gao, Z.; Dyrek, K.; Schlick, S.** Ligand Design by Ionomers. ESR of Mo(V) in Perfluorinated Ionomer Supports, *J. Phys. Chem.* **1996**, *100*, 2229-2236.
119. **Bednarek, J.; Lund, A; Schlick, S.** Unstable Intermediates in X-Irradiated Clathrate Hydrates: ESR and ENDOR of Tetramethylammonium Hydroxide Pentahydrate (TMNOH), *J. Phys. Chem.* **1996**, *100*, 3910-3916.
120. **Gao, Z.; Pilar, J.; Schlick, S.** ESR Imaging of Tracer Translational Diffusion in Polystyrene Solutions and Swollen Networks, *J. Phys. Chem.* **1996**, *100*, 8430-8435.

121. **Kruczala, K.; Gao, Z.; Schlick, S.** 2D Spatial-Spectral ESR Imaging of Diffusion Based on Mo(V), *J. Phys. Chem.* **1996**, *100*, 11427-11431.
122. **Gao, Z.; Schlick, S.** Binding and Transport of Mo^V in Perfluorinated Ionomers Swollen by Ethanol Using ESR and ESR Imaging, *J. Chem. Soc. Faraday Trans.* **1996**, *92*, 4239-4245.
123. **Kutsumizu, S.; Schlick, S.** Aggregation of EMAA Ionomers in Aqueous Solutions: ESR Spectra of Amphiphilic Spin Probes, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1996**, *37(2)*, 825-826.
124. **Gao, Z.; Schlick, S.** Translational Diffusion of Mo^V in Perfluorinated Ionomers by ESR Imaging (ESRI), *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1996**, *37(2)*, 827-828.
125. **Zhou, L.; Schlick, S.** Hydration and Dynamics in Pluronic L64 From ESR Spectra of Amphiphilic Spin Probes, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1996**, *37(2)*, 829-830.
126. **Hu, X.; Schlick, S.; Vanhoorne, P.** Cu²⁺ Complexation in Telechelic Polyisoprene, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **1996**, *37(2)*, 831-832.
127. **Schlick, S.** Electron Spin Resonance Imaging (ESRI) of Polymeric Systems, *Polym. Prepr. Japan (Soc. Polym. Sci. Japan)* **1996**, *45*, 82-83.
128. **Kutsumizu, S.; Hara, H.; Schlick, S.** Self-assembling of Ethylene-Methacrylic Acid (EMAA) Ionomers in Aqueous Solutions and as Swollen Membranes from ESR Spectra of Amphiphilic Spin Probes. 1. Structure of Aggregates and Effect of Ionomer Concentration, *Macromolecules* **1997**, *30*, 2320-2328.
129. **Kutsumizu, S.; Schlick, S.** Self-assembling of Ethylene-Methacrylic Acid (EMAA) Ionomers in Aqueous Solutions and as Swollen Membranes from ESR Spectra of Amphiphilic Spin Probes. 2. Dynamics in Aggregates and Correlation with Thermal Transitions, *Macromolecules* **1997**, *30*, 2329-2336.
130. **Malka, K.; Schlick, S.** Hydration, Dynamics, and Transport Across the Phase Diagram of Aqueous EO₁₃PO₃₀EO₁₃ (Pluronic L64) by Spin Probe ESR and ESR Imaging, *Macromolecules* **1997**, *30*, 456-465.
131. **Caragheorghopol, A.; Pilar, J.; Schlick, S.** Hydration and Dynamics in Reverse Micelles of the Triblock Copolymer EO₁₃PO₃₀EO₁₃ in Water/o-xylene Mixtures: A Spin Probe Study, *Macromolecules* **1997**, *30*, 2923-2933.
132. **Schlick, S.** A Sabbatical Stay in Japan, posted February 1997 on the Homepage of the Tokyo Bureau of the National Science Foundation.
133. **Kruczala, K.; Schlick, S.** Bonding of Mo^V to Poly(Ethylene-co-Methacrylic Acid) (EMAA) Ionomers From X- and W-Band ESR, and IR Spectroscopies, *J. Phys. Chem.* **1998**, *102*, 6161-6168.
134. **Szajdzinska-Pietek, E.; Wolszczak, M.; Plonka, A.; Schlick, S.** Fluorescence Studies of Self-Assembling in Aqueous Solutions of Poly(Ethylene-co-Methacrylic Acid) (EMAA) Ionomers, *J. Am. Chem. Soc.* **1998**, *120*, 4215-4221.
135. ***Schlick, S.; Eagle, P.; Kruczala, K.; Pilar, J.** Electron Spin Resonance Imaging (ESRI) of Transport Processes in Polymeric Systems, In *Spatially Resolved Magnetic Resonance: Methods, Materials, Medicine, Biology, Rheology, Ecology, Hardware*; P. Blömler, B. Blömler, R. Botto, E. Fukushima, Eds.; Wiley-VCH: Weinheim, 1998; Chapter 17, pp 221-234.
136. **Szajdzinska-Pietek, E.; Pillars, T.S.; Schlick, S.; Plonka, A.** ESR Study of Polymer Self-Assembling: Cationic

- Spin Probes in Aqueous Solutions of Poly(Ethylene-*co*-Methacrylic Acid) (EMAA) Ionomers, *Macromolecules* **1998**, *31*, 4586-4594.
137. **Kruczala, K.; Schlick, S.** Interaction of Ionomers and Polyelectrolytes with Divalent Transition Metal Cations Studied by ESR Spectroscopy, *Polym. Mat. Sci. Eng. (Proc. ACS Div. PMSE)* **1998**, *79*, 475-476.
138. **Schlick, S.; Gao, Z.; Matsukawa, S.; Ando, I.; Fead, E.; Rossi, G.** Swelling and Transport in Polyisoprene Networks Exposed to Benzene-Cyclohexane Mixtures: A Case Study in Multicomponent Diffusion, *Macromolecules* **1998**, *31*, 8124-8133.
139. **Carageorghopol, A.; Schlick, S.** Hydration Across the Phase Diagram of the Triblock Copolymers EO₁₃PO₃₀EO₁₃ (Pluronic L64) and EO₆PO₃₆EO₆ (Pluronic L62), Based on Electron Spin Resonance (ESR) Spectra of Cationic Spin Probes, *Macromolecules* **1998**, *31*, 7736-7745.
140. **Kruczala, K.; Schlick, S.** Interaction of Ionomers and Polyelectrolytes with Divalent Transition Metal Cations (Cu²⁺ and VO²⁺): A Study by Electron Spin Resonance Spectroscopy and Viscosimetry, *J. Phys. Chem. B* **1999**, *103*, 1934-1943.
141. **Degtyarev, E.N.; Schlick, S.** Diffusion Coefficients of Small Molecules in Various Phases of Pluronic L64 Measured by One-Dimensional Electron Spin Resonance Imaging (1D ESRI), *Langmuir* **1999**, *15*, 5040-5047.
142. **Motyakin, M.V.; Gerlock, J.L.; Schlick, S.** Electron Spin Resonance Imaging (ESRI) of Degradation and Stabilization Processes: Behavior of a Hindered Amine Stabilizer in UV-Exposed Poly(acrylonitrile-butadiene-styrene) (ABS) Polymers, *Macromolecules* **1999**, *32*, 5463-5467.
143. **Szajdzinska-Pietek, E.; Wolszczak, M.; Plonka, A.; Schlick, S.** Structure and Dynamics of Micellar Aggregates in Aqueous Nafion Solutions Reported by Electron Spin Resonance (ESR) and Fluorescence Probes, *Macromolecules* **1999**, *32*, 7454-7460.
144. **Pilar, J.; Labsky, J.; Marek, A.; Konak, C.; Schlick, S.** Translational Diffusion of Paramagnetic Tracers in Poly(1-vinyl pyrrolidone) (PVP) Hydrogel and Concentrated Aqueous Solutions by 1D Electron Spin Resonance Imaging, *Macromolecules* **1999**, *32*, 8230-8233.
145. ***Schlick, S.** A Project Development Visit in Romania. Report to the National Research Council, Collaboration for Basic Science and Engineering (COBASE) Grants Program with Central/Eastern Europe, 9 August 1999.
146. **Zhou, L.; Schlick, S.** Electron Spin Resonance (ESR) Spectra of Amphiphilic Spin Probes in the Triblock Copolymer EO₁₃PO₃₀EO₁₃ (Pluronic L64): Hydration, Dynamics, and Order in the Polymer Aggregates, *Polymer* **2000**, *41*, 4679-4689.
147. **Kruczala, K.; Motyakin, M.V.; Schlick, S.** 1D and 2D Spatial-Spectral Electron Spin Resonance Imaging (ESRI) of Degradation and Stabilization Processes in Poly(acrylonitrile-butadiene-styrene) (ABS), *J. Phys. Chem. B* **2000**, *104*, 3387-3392.
148. **Schlick, S.; Kruczala, K.; Motyakin, M.V.; Gerlock, J.L.** Spatial Effects in Polymer Degradation: A Study by 1D and 2D Electron Spin Resonance (ESRI), *Polym. Mat. Sci. Eng. (Proc. ACS Div. PMSE)* **2000**, *83*, 120-121.
149. **Motyakin, M.V.; Schlick, S.** 1D and 2D Electron Spin Resonance (ESRI) of HAS-Derived Nitroxides in ABS Copolymers: Effect of Irradiation Wavelength, *Polym. Mat. Sci. Eng. (Proc. ACS Div. PMSE)* **2000**, *83*, 395-396.
150. ***Motyakin, M.V.; Cornet, N.; Schlick, S.; Gebel, G.** Morphology of Sulfonated Polyimide Ionomers From ESR Spectra of Paramagnetic Transition Metal Cations and Nitroxide Spin Probes, *Bull. Polish Acad. Sci.* **2000**, *48(4)*, 273-292.

151. *Caldararu, H.; Caragheorghopol, A.; Schlick, S. Hydration and Order in Different Aggregates of a Poly(ethylene Oxide) Alkyl Ether in Aqueous Solution. A Spin Probe Study, *Bull. Polish Acad. Sci.* **2000**, *48(4)*, 367-383.
152. *Schlick, S.; Pilar, J. Permanent and Reversible Networks: Transport of Guests and Guest-Host Interactions, In Proceedings of 7th International Polymer Conference (IPC 99); T. Kajiyama, Ed.; Wiley-VCH: Tokyo, *Macromol. Symp.* **2000**, *159*, 187-195.
153. *Motyakin, M.V.; Gerlock, J.L.; Schlick, S. Electron Spin Resonance Imaging (ESRI) of Degradation and Stabilization Processes in Polymers: Poly(acrylonitrile-butadiene-styrene) (ABS) Polymers, In *Ageing Studies and Lifetime Extension of Materials*; L. Mallinson, Ed.; Kluwer Academic/Plenum Publishing Corporation: New York, 2001; pp 353-358.
154. *Schlick, S.; Motyakin, M.V. Application of 1D and 2D Electron Spin Resonance Imaging to Transport in and Degradation of Polymers, In *Instrumental Methods in Electron Magnetic Resonance, Biological Magnetic Resonance, Vol. 21*; Bender, C.J., Berliner, L.J., Eds.; Kluwer Academic/Plenum Publishing Corporation: New York, 2004, pp 349-384.
155. Motyakin, M.V.; Schlick, S. Spectral Profiling by 1D and 2D Electron Spin Resonance Imaging: Nitroxide Radicals in UV and Thermal Degradation of Poly(acrylonitrile-butadiene-styrene) Containing a Hindered Amine Stabilizer, *Macromolecules* **2001**, *34*, 2854-2864.
156. Schlick, S.; Kruczala, K.; Motyakin, M.V.; Gerlock, J.L. Spectral Profiling of Radicals in Polymer Degradation based on Electron Spin Resonance Imaging (ESRI), *Polym. Degrad. Stab.* **2001**, *73/3*, 471-475.
157. Schlick, S.; Motyakin, M.V. Behavior of HAS-Derived Nitroxides in Thermally Degraded Poly(acrylonitrile-butadiene-styrene) (ABS) Based on ESR Imaging and FTIR, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **2001**, *42(2)*, 195-196.
158. Schlick, S.; Varghese, B. Morphology of Poly(acrylonitrile-butadiene-styrene) (ABS) and Corresponding Homopolymers and Dicopolymers From Spin Probe ESR and Simulations, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **2001**, *42(2)*, 264-265.
159. Schlick, S.; Bokria, J.G. Infrared Profiling of Degradation Products in Poly(acrylonitrile-butadiene-styrene) (ABS) Exposed to UVB Radiation and Oxygen, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **2001**, *42(2)*, 244-245.
160. Varghese, B.; Schlick, S. Microphase Separation in Poly(acrylonitrile-butadiene-styrene) (ABS) Studied with Paramagnetic Spin Probes. 1. Electron Spin Resonance Spectra, *J. Polym. Sci. B: Polym. Phys.* **2002**, *40*, 415-423.
161. Varghese, B.; Schlick, S. Microphase Separation in Poly(acrylonitrile-butadiene-styrene) (ABS) Studied with Paramagnetic Spin Probes. 2. Simulation of Electron Spin Resonance Spectra, *J. Polym. Sci. B: Polym. Phys.* **2002**, *40*, 424-433.
162. Motyakin, M.V.; Schlick, S. Thermal Degradation at 393 K of Poly(acrylonitrile-butadiene-styrene) Containing a Hindered Amine Stabilizer: A Study by 1D and 2D Electron Spin Resonance Imaging (ESRI) and ATR-FTIR, *Polym. Degrad. Stab.* **2002**, *76(1)*, 25-36.
163. Motyakin, M.V.; Schlick, S. Electron Spin Resonance Imaging (ESRI) and ATR-FTIR Study of Poly(acrylonitrile-butadiene-styrene) (ABS) Containing a Hindered Amine Stabilizer and Thermally Treated at 353 K, *Macromolecules* **2002**, *35*, 3984-3992.
164. Bokria, J.; Schlick, S. Spatial Effects in the Photodegradation of Poly(acrylonitrile-butadiene-styrene): A Study

- by ATR-FTIR, *Polymer* **2002**, *43*, 3239-3246.
165. **Marek, A.; Labsky, J.; Konak, C.; Pilar, J.; Schlick, S.** Translational Diffusion of Paramagnetic Tracers in HEMA Gels and in Concentrated Solutions of PolyHEMA by 1D Electron Spin Resonance Imaging, *Macromolecules* **2002**, *35*, 5517-5528.
166. **Kutsumizu, S.; Goto, M.; Yano, S.; Schlick, S.** Structure and Dynamics of Ionic Aggregates in Ethylene Ionomers and Their Effect on Polymer Dynamics: A Study by Small-Angle X-ray Scattering and Electron Spin Resonance Spectroscopy, *Macromolecules* **2002**, *35*, 6298-6305.
167. ***Schlick, S.** ESR Imaging of Polymer Degradation and Stabilization, *Proceedings of the 5th International Symposium "Coatings for Plastics"*, 2002.
168. ***Lucarini, M.; Pedulli, G.F.; Motyakin, M.V.; Schlick, S.** Electron Spin Resonance Imaging of Polymer Degradation and Stabilization, *Progress Polym. Sci.* **2003**, *28*, 331-340.
169. **Kruczala, K.; Varghese, B.; Bokria, J.G.; Schlick, S.** Thermal Aging of Heterophasic Propylene-Ethylene Copolymers: Morphological Aspects, Based on ESR, FTIR and DSC, *Macromolecules* **2003**, *36*, 1899-1908.
170. **Kruczala, K.; Bokria, J.G.; Schlick, S.** Thermal Aging of Heterophasic Propylene-Ethylene Copolymers: Spatial and Temporal Aspects of Degradation Based on ESR, ESR Imaging, and FTIR, *Macromolecules* **2003**, *36*, 1909-1919.
171. **Dragutan, I.; Bokria, J.G.; Varghese, B.; Szajdzinska-Pietek, E.; Schlick, S.** Self-Assembling in Nafion Perfluorinated Ionomers Based on ESR Spectra of Novel Fluorinated Nitroxide Spin Probes, *J. Phys. Chem. B* **2003**, *107*, 11397-11403.
172. **Szajdzinska-Pietek, E.; Pinteala, M.; Schlick, S.** Monitoring pH-Dependent Conformational Changes in Aqueous Poly(methacrylic acid) and Its Block Copolymer with Polydimethylsiloxane, Based on Fluorescence Spectra of Pyrene and 1,3-Bis(1-pyrenyl)propane, *Polymer* **2004**, *45*, 3997-4004.
173. **Schlick, S.; Kruczala, K.; Bokria, J.G.** ESR Imaging of Degradation in Heterophasic Polymers: The Case of Propylene-Ethylene Copolymers (HPEC), *Polym. Mat. Sci. Eng. (Proc. ACS Div. PMSE)* **2003**, *89*, 135-136.
174. **Bosnjakovic, A.; Schlick, S.** Nafion Perfluorinated Membranes Treated in Fenton Media: Radical Species Detected by ESR Spectroscopy, *J. Phys. Chem. B* **2004**, *108*, 4332-4337.
175. **Szajdzinska-Pietek, E.; Schlick, S.** Self-Assembling of Ion-Containing Polymers and Surfactants in Aqueous Solutions Studied by ESR and Fluorescence Probes, *J. Molecular Liquids* **2005**, *117*, 153-164.
176. **Schlick, S.; Kruczala, K.** Spatially-Resolved Degradation in Heterophasic Polymers based on ESR Imaging and FTIR: The Case of Propylene-Ethylene Copolymers (HPEC), *JCT Research* **2005**, *2(5)*, 389-397.
177. **Pinteala, M.; Epure, V.; Harabagiu, V.; Simionescu, B.C.; Schlick, S.** Concentration- and pH-Dependent Conformational Changes in Aqueous Polymethacrylic Acid and its Block Copolymers with Polydimethylsiloxane, Based on Fluorescence Spectra of Pyrene and Potentiometry, *Macromolecules* **2004**, *37*, 4623-4634.
178. **Kutsumizu, S.; Schlick, S.** Structure and Dynamics of Ionic Aggregates in Ethylene Ionomer Membranes: Recent ESR Studies, *J. Molecular Structure* **2005**, *739/1-3*, 191-198.
179. **Schlick, S.; Jeschke, G.** Electron Spin Resonance, In *Encyclopedia of Polymer Science and Engineering*, Kroschwitz, J.I., Ed.; Wiley-Interscience: New York, NY, 2004; Chapter 9, pp 614-651; web edition: 15 July 2004. Hardcopy edition: 15 August 2004.

180. **Yamane, Y.; Ando, I.; Buchholz, F.L.; Reinhardt, A.R.; Schlick, S.** Detection of Spatial Inhomogeneity in Poly(acrylic acid) Gels by Measuring Time-Dependent Diffusion Coefficients of a Probe in NMR Experiments: Effect of the Degree of Cross-Linking and Degree of Swelling, *Macromolecules* **2004**, *37*, 9841-9849.
181. **Schlick, S.; Kruczala, K.** UVA and UVB Irradiation of Heterophasic Propylene-Ethylene Copolymers: Visualizing Stabilization and Early Stages of Degradation Using Electron Spin Resonance Imaging (ESRI), *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **2005**, *46(1)*, 348-349.
182. **Schlick, S.; Kadirov, M.K.** Radicals Detected by Electron Spin Resonance (ESR) Spectroscopy in UV-Irradiated Nafion Membranes: The Effect of Counterions and H₂O₂, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **2005**, *46(1)*, 307-308.
183. **Kadirov, M.K.; Bosnjakovic, A.; Schlick, S.** Membrane-Derived Fluorinated Radicals Detected by ESR in UV-Irradiated Nafion and Dow Ionomers: The Effect of Counterions and H₂O₂, *J. Phys. Chem. B* **2005**, *109*, 7664-7670.
184. **Kruczala, K.; Aris, W.; Schlick, S.** Stabilization and Early Degradation of UV-Irradiated Heterophasic Propylene-Ethylene Copolymers Based on ESR, ESR Imaging, UV-Vis and DSC: Effect of Ethylene Content and UV Wavelength, *Macromolecules* **2005**, *38*, 6979-6987.
185. ***Schlick, S.** Electron Spin Resonance Imaging in Polymer Research, In *Modern Magnetic Resonance*, Webb, G.A., Ed.; Springer Verlag: Dordrecht, The Netherlands, 2006; Part 1: Applications in Chemistry, Biological and Marine Sciences; pp 175-181.
186. **Motyakin, M.V.; Schlick, S.** ESR Imaging and FTIR Study of Thermally Treated Poly(acrylonitrile-butadiene-styrene) (ABS) Containing a Hindered Amine Stabilizer: Effect of Polymer Morphology, and Butadiene and Stabilizer Content, *Polym. Degrad. Stab.* **2006**, *91/7*, 1462-1470.
187. **Miwa, Y.; Drews, A.R.; Schlick, S.** Detection of the Direct Effect of Clay on Polymer Dynamics: The Case of Spin-Labeled Poly(methyl acrylate)/Clay Nanocomposites Studied by ESR, XRD, and DSC, *Macromolecules* **2006**, *39*, 3304-3311.
188. *Advanced ESR Methods in Polymer Research*, S. Schlick, Ed.; Wiley: Hoboken, NJ, 2006; 12 chapters, 353 pages, ISBN 9780471731894.
189. **Jeschke, G.; Schlick, S.** Continuous-Wave (CW) and Pulsed ESR Methods, In *Advanced ESR Methods in Polymer Research*, S. Schlick, Ed.; Wiley: Hoboken, NJ, 2006; Chapter 1, pp 3-24.
190. **Schlick, S.** ESR Imaging, In *Advanced ESR Methods in Polymer Research*, S. Schlick, Ed.; Wiley: Hoboken, NJ, 2006; Chapter 4, pp 85-98.
191. **Roduner, E.; Schlick, S.** ESR Methods for Assessing the Stability of Polymer Membranes Used in Fuel Cells, In *Advanced ESR Methods in Polymer Research*, S. Schlick, Ed.; Wiley: Hoboken, NJ, 2006; Chapter 8, pp 197-228.
192. **Schlick, S.; Kruczala, K.** Spatially-Resolved Degradation in Heterophasic Polymers from 1D and 2D Spectral-Spatial ESR Imaging Experiments, In *Advanced ESR Methods in Polymer Research*, S. Schlick, Ed.; Wiley: Hoboken, NJ, 2006; Chapter 8, pp 229-254.
193. **Bosnjakovic, A.; Schlick, S.** Spin Trapping by DMPO in Fenton Media in the Presence of Nafion Perfluorinated Membranes: Limitations and Potential, *J. Phys. Chem. B* **2006**, *110*, 10720-10728.

194. ***Schlick, S.; Motyakin, M.V.** Polymer Degradation by ESR Imaging: Beyond Phantoms, In *Specialist Periodical Reports - Electron Paramagnetic Resonance*; Gilbert, B.C., Davies, M.J., Murphy, D.M., Eds.; Royal Society of Chemistry: Cambridge, 2007; vol. 20, pp 1-28.
195. **Schlick, S.; Aris, W.; Pinteala, M.** Using Spin Probe ESR to Study Self-Assembling of Amphiphilic PDMS-*b*-PMA Multiblock Copolymers in Aqueous Media, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **2006**, *47*(2), 802-803.
196. **Miwa, Y.; Drews, A.R.; Schlick, S.** Dynamics of Polymers in *Exfoliated* and *Intercalated* Polymer/Clay Nanocomposites Studied by ESR, XRD, and DSC, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **2006**, *47*(2), 839-840.
197. **Schlick, S.; Danilczuk, M.** Spin Trapping ESR Methods for the Study of Membrane Degradation in Fuel Cells: The Case of Model Compounds, *Polym. Mat. Sci. Eng. (Proc. ACS Div. PMSE)* **2006**, *95*, 146-147.
198. **Schlick, S.; Bosnjakovic, A.; Danilczuk, M.** Direct ESR and Spin Trapping Methods for the Study of Radicals in PEMs and Model Compounds Exposed to Oxygen Radicals, *Prepr. Pap. -Am. Chem. Soc., Div. Fuel Chem.* **2006**, *51*(2), 688-689.
199. **Jeschke, G.; Schlick, S.** Spatial Distribution of Stabilizer-derived Radicals During Thermal Degradation of Poly(acrylonitrile-butadiene-styrene): A Unified Picture From Pulsed ELDOR and ESR Imaging, *Phys.Chem.Chem.Phys* (PCCP) **2006**, *8*, 4095-4103.
200. ***Schlick, S. ; Kruczala, K.** ESR and ESR Imaging Methods for the Study of Oxidative Polymer Degradation, In *Molecular Characterization and Analysis of Polymers*; Chalmers, J., Meier, R., Eds.; Elsevier: Amsterdam, 2008, in press.
201. ***Bosnjakovic, A.; Kadirov, M.K.; Schlick, S.** Using ESR Spectroscopy to Study Radical Intermediates in Proton Exchange Membranes Exposed to Oxygen Radicals, *Rev. Chem. Intermediates* **2007**, *33*, 677-687.
202. **Danilczuk, M.; Bosnjakovic, A.; Kadirov, M.K.; Schlick, S.** Direct ESR and Spin Trapping Methods for the Detection and Identification of Radical Fragments in Nafion Membranes and Model Compounds Exposed to Oxygen Radicals, *J. Power Sources* **2007**, *172*, 78-82.
203. **Szajdzinska-Pietek, E.; Sulak, K.; Dragutan, I.; Schlick, S.** ESR Study of Aqueous Micellar Solutions of Perfluoropolyether Surfactants with the Use of Fluorinated Spin Probes, *J. Colloid Interface Sci.* **2007**, *312*, 405-412.
204. **Spalek, T.; Kruczala, K.; Sojka, Z.; Schlick, S.** Deducing 1D Concentration Profiles From ESR Imaging: A New Approach Based on Optimization With the Genetic Algorithm, *J. Magn. Reson.* **2007**, *189*, 139-150.
205. **Lund, A.; Macomber, L.; Danilczuk, M.; Stevens, J.; Schlick, S.** Determining the Geometry and Magnetic Parameters of Fluorinated Radicals by Simulation of Powder ESR Spectra and DFT Calculations: The Case of the Radical RCF₂CF₂' in Nafion Perfluorinated Ionomers, *J. Phys. Chem. B* **2007**, *111*, 9484-9491.
206. **Schlick, S.; Kruczala, K.** Spatially Resolved Polymer Degradation Via ESR Imaging: Software Development and Prospects, *Polym. Prepr. (Am. Chem. Soc. Div. Polym. Chem.)* **2007**, *48*(2), 501-502.
207. **Danilczuk, M.; Coms, F.D.; Schlick, S.** Fragmentation of Model Compounds Exposed to Oxygen Radicals: Spin Trapping ESR Experiments, and Implications for Behavior of PEMs in Fuel Cells, submitted October 2007 to *Fuel Cells*.
208. **Wang, W.; Chan, Tsung-Ta; Perkowski, A.J.; Schlick, S.; Winey, K.I.** Composition and Structure Changes of

the Ionic Aggregates in Poly (styrene-*co*-methacrylic acid) Ionomers Depending on Acid Content and Neutralization Level by Cu(II), submitted February 2008 to *Macromolecules*.

209. **Miwa, Y.; Drews, A.R.; Schlick, S.** Unique Structure and Dynamics of Poly(ethylene oxide) in Layered Silicate Nanocomposites: Accelerated Segmental Mobility Revealed by Simulating ESR Spectra of Spin Labels, XRD, FTIR, and DSC, submitted January 2008 to *Macromolecules*.
210. **Danilczuk, M.; Coms, F.D.; Schlick, S.** Detection by Spin Trapping of Adducts of Oxygen Radicals, Nafion-Derived Fragments, and Hydrogen and Deuterium Atoms in a Fuel Cell Inserted in the ESR Resonator, manuscript in preparation.
211. **Gustafsson, H.; Kruczala, K.; Lund, E.; Schlick, S.** Using ESR Imaging to Visualize Dose Distribution and Linear Energy Transfer after Heavy Ions Irradiation, submitted.

Note: Asterisk (*) indicates an invited contribution in the publication list.