

REFERENCES

- Abbrent S., Plestil J., Hlavata D., Lindgren J., Tegenfeldt J., Wendsjo A., Crystallinity and morphology of PVdF–HFP–based gel electrolytes, *Polymer* 42 (2001) 1407–1416.
- Abdelrazek E.M., Influence of FeCl₃ filler on the structure and physical properties of polyethyl–methacrylate films, *Physica B: Condensed Matter* 400 (2007) 26–32.
- Abu–Isa I.A., Trexler H.E., Mechanism of degradation of fluorocarbon elastomers in engine oil, *Rubber Chemistry and Technology* 58 (1985) 326–349.
- Aegerter M.A., Reisfeld R., Jorgensen C.K. (Eds.). (1996). Sol–gel chromogenic materials and devices. *Structure and Bonding*. (pp. 149–194). Berlin: Springer–Verlag.
- Agnihotry S.A., Nidhi, Pradeep, Sekhon S.S., Li⁺ conducting gel electrolyte for electrochromic windows, *Solid State Ionics* 136–137 (2000) 573–576.
- Al–Kahlout A., Vieira D., Avellaneda C.O., Leite E.R., Aegerter M.A., Pawlicka A., Gelatin–based protonic electrolyte for electrochromic windows, *Ionics* 16 (2010) 13–19.
- Ahmed M.T., Fahmy T., Thermal induced structural change investigations in PVC/PEMA polymer blend, *Polymer Testing*, 20 (2000) 477–484.
- Ali A.M.M., Subban R.H.Y., Bahron H., Winie T., Latif F., Yahya M.Z.A., Grafted natural rubber–based polymer electrolytes: ATR–FTIR and conductivity studies, *Ionics* 14 (2008) 491–500.
- Ali A.M.M., Yahya M.Z.A., Bahron H., Subban R.H.Y., Electrochemical studies on polymer electrolytes based on poly(methylmethacrylate)–grafted natural rubber for lithium polymer battery, *Ionics* 12 (2006) 303–307.
- Ali A.M.M., Yahya M.Z.A., Bahron H., Subban R.H.Y., Harun M.K., Atan I., Impedance studies on plasticized PMMA–LiX [X: CF₃SO₃⁻, N(CF₃SO₂)₂⁻] polymer electrolytes, *Materials Letters* 61 (2007) 2026–2029.
- Ali R. Md., Harun N.I., Ali A.M.M., Yahya M.Z.A., Effect of temperature on conductivity studies of cellulose acetate based polymer electrolytes, *Advanced Materials Research* (2013) 240–245.

Alia J.M., Diaz de Mera Y., Edwards H.G.M., Garcia F.J., Lawson E.E., Infrared spectroscopic study of ionic association of lithium trifluoromethanesulfonate in several solvents, *Journal of Molecular Structure* 408 (1997) 439–450.

Ameduri B., From vinylidene fluoride (VDF) to the applications of VDF-containing copolymers: recent developments and future trends, *Chemical Reviews* 109 (2009) 6632–6686.

Ameduri B., Boutevin B. (2004) *Well-architected fluoropolymers: Synthesis, properties and applications*. Amsterdam: Elsevier.

Anderson R.F., Punserson J.O. (1979) In Banks R.E. (Ed.) *Organofluorine chemicals and their industrial applications*, Horwood: Chichester.

Angell C.L., The infra-red spectra and structure of ethylene carbonate, *Transactions of the Faraday Society* 52 (1956) 1178–1183.

Angulakshmi M., Thomas S., Nahm K.S., Manuel Stephan A., Nimma Elizabeth R., Electrochemical and mechanical properties of nanochitin-incorporated PVDF-HFP-based polymer electrolytes for lithium batteries, *Ionics* 17 (2011) 407–414.

Aravindan V., Lakshmi C., Vickraman P., Investigations on Na⁺ ion conducting polyvinylidene fluoride-co-hexafluoropropylene/poly ethylmethacrylate blend polymer electrolytes, *Current Applied Physics* 9 (2009) 1106–1111.

Aravindan V., Vickraman P., Lithium fluoroalkylphosphate based novel composite polymer electrolytes (NCPE) incorporated with nanosized SiO₂ filler, *Materials Chemistry and Physics* 115 (2009) 251–257.

Armand M., The history of polymer electrolytes, *Solid State Ionics* 69 (1994) 309–319.

Armand M.B., Chabagno J.M., Duclot M.J. (1979). In Vashishta P., Mundy L.N., Shenoy G. (Eds.), *Fast-ion transport in solids* (pp. 131). North-Holland, Amsterdam.

Aravindan V., Lakshmi C. and Vickraman P., Investigations on Na⁺ ion conducting polyvinylidene fluoride-co-hexafluoropropylene/poly ethylmethacrylate blend polymer electrolytes, *Current Applied Physics* 9 (2009) 1106–1111.

Avellaneda C.O., Pawlicka A., Preparation of transparent CeO₂-TiO₂ coatings for electrochromic devices, *Thin Solid Films* 335 (1998) 245–248.

Avellaneda C.O., Vieira D.F., Al-Kahlout A., Leite E.R., Pawlicka A., Aegerter M.A., Solid-state electrochromic devices with Nb₂O₅:Mo thin film and gelatin-based electrolyte, *Electrochimica Acta* 53 (2007) 1648–1654.

Bachman M.A., Lando J.B., A reexamination of the crystal structure of phase II of poly(vinylidene fluoride), *Macromolecules* 14 (1981) 40–46.

Balian S.R.C., Ibrahim S., Mohamed N.S., Polymer electrolyte of PVdF–HFP/PEMA–NH₄CF₃SO₃–TiO₂ and its application in proton batteries, *Advanced Materials Research* 285–288 (2011) 287–290.

Bandara L.R.A.K., Dissanayake M.A.K.L., Mellander B.E., Ionic conductivity of plasticized (PEO)–LiCF₃SO₃ electrolytes, *Electrochimica Acta* 43 (1998) 1447–1451.

Banks R.E. (1970). *Fluorocarbons and their derivatives* (pp. 17). London: Macdonald.

Barbosa P.C., Rodrigues L.C., Silva M.M., Smith M.J., Parola A.J., Pina F., Pinheiro C., Solid-state electrochromic devices using pTMC/PEO blends as polymer electrolytes, *Electrochimica Acta* 55 (2010) 1495–1502.

Bashir Z., Church S.P., Price D.M. The formation of polymer–solvent complexes of polyacrylonitrile from organic solvents containing carbonyl groups, *Acta Polymer* 44 (1993) 211–218.

Baskaran R., Selvasekaranpandian S., Hirankumar G. Bhuvanewari M.S., Vibrational, ac impedance and dielectric spectroscopic studies of poly(vinylacetate)–N,N–dimethylformamide–LiClO₄ polymer gel electrolytes, *Journal of Power Sources* 134 (2004) 235–240.

Baskaran R., Selvasekarapandian S., Hirankumar G., Bhuvanewari M.S., Dielectric and conductivity relaxations in PVAc based polymer electrolytes, *Ionics* 10 (2004) 129–134.

Baskaran R., Selvasekarapandian S., Kuwata N., Kawamura J., Hattori T., ac impedance, DSC and FT–IR investigations on (x)PVAc–(1–x)PVdF blends with LiClO₄, *Materials Chemistry and Physics* 98 (2004) 55–61.

Battisti D., Nazri G.A., Klassen B., Aroca R., Vibrational studies of lithium perchlorate in propylene carbonate solutions, *The Journal of Physical Chemistry B* 97 (1993) 5826–5830.

- Benz M., Euler W.B., Gregory O.J., The role of solution phase water on the deposition of thin films of poly(vinylidene fluoride), *Macromolecules* 35 (7) (2002) 2682–2688.
- Berthier C., Gorecki W., Minier M., Armand M.B., Chabagno J.M., Rigaud P., Microscopic investigation of ionic conductivity in alkali metal salts–poly(ethylene oxide) adducts, *Solid State Ionics* 11 (1983) 91–95.
- Bhattacharya B., Lee J.Y., Geng J., Jung H.T., Park J.K., Effect of cation size on solid polymer electrolyte based dye–sensitized solar cells, *Langmuir* 25 (2009) 3276–3281.
- Bhide A., Hariharan K., Ionic transport studies on PEO₆:NaPO₃ polymer electrolyte plasticized with PEG₄₀₀, *European Polymer Journal* 43 (2007) 4253–4270.
- Bircan H., Seshadri V., Padilla J., Invernale M., Otefo T.F., Sotzing G.A., Use of polymer/ionic liquid plasticizers as gel electrolytes in electrochromic devices, *Journal of Physics: Conference Series* 127 (2008) 012011.
- Bohnke O., Frand G., Rezrazi M., Rrousselot C., Truche C., Fast ion transport in new lithium electrolytes gelled with PMMA. 2. Influence of lithium salt concentration, *Solid State Ionics* 66 (1993) 105–112.
- Bonhote P., Dias A.–P., Papageorgiou N., Kalyanasundaram K., Gratzel M., Hydrophobic, Highly conductive ambient–temperature molten salts, *Inorganic Chemistry* 35 (1996) 1168–1178.
- Brooksby P.A., Fawcett W.R., Infrared (ATR) study of hydrogen bonding in solutions containing water and ethylene carbonate, *The Journal of Physical Chemistry A* 104 (2000) 8307–8314.
- Brown H., A molecular interpretation of the toughness of glassy polymers, *Macromolecules* 24 (1991) 2752–2756.
- Buraidah M.H., Arof A.K., Characterization of chitosan/PVA blended electrolyte doped with NH₄I, *Journal of Non–Crystalline Solids* 357 (2011) 3261–3266.
- Buraidah M.H., Teo L.P., Yusuf S.N.F., Noor M.M., Kufian M.Z., Careem M.A., Majid S.R., Taha R.M., Arof A.K., TiO₂/chitosan–NH₄I(+I₂)–BMII–based dye–sensitized solar cells with anthocyanin dyes extracted from black rice and red cabbage, *International Journal of Photoenergy* (2011) Article ID 273683.

Carvalho Costa I.M., Salaro C.P., Costa M.C., Polymethylmethacrylate facial implant: A successful personal experience in Brazil for more than 9 years, *Dermatologic Surgery* 35 (2009) 1221–1227.

Cazzanelli E., Mariotto G., Appetechi G.B., Benevelli F., Mustarelli P., Li⁺ solvation in ethylene carbonate–propylene carbonate concentrated solutions: A comprehensive model, *Journal of Chemical Physics* 107 (1997) 5740–5747.

Chan, B.K.M., Chang, N.–H., Grimmett, M.R., The synthesis and thermolysis of imidazole quaternary salts, *Australian Journal of Chemistry* 30 (1977) 2003–2005.

Chang H., Lo Y.–J., Pomegranate leaves and mulberry fruits natural sensitizers for dye–sensitized solar cells, *Solar Energy* 84 (10) (2010) 1833–1837.

Chakrabarti A., Filler R., Mandal B.K., synthesis and characterization of a new class of monolithium salts for PEO–based solid polymer electrolyte systems, *ECS Transactions* 6 (2007) 77–88.

Chen Y.T., Chuang Y.C., Su J.H., Yu H.C., Chen–Yang Y.W., High discharge capacity solid composite polymer electrolyte lithium battery, *Journal of Power Sources* 196 (2011) 2802–2809.

Chiappe C., Pieraccini D., Ionic liquids: solvent properties and organic reactivity, *Journal of Physical Organic Chemistry* 18 (2005) 275–297.

Chintapalli S., Frech R., Effect of plasticizers on high molecular weight PEO–LiCF₃SO₃ complexes, *Solid State Ionics* 86–88 (1996) 341–346.

Chiu C.–Y., Yen Y.–J., Kuo S.–W., Chen H.–W., Chang F.–C., Complicated phase behavior and ionic conductivities of PVP–co–PMMA–based polymer electrolytes, *Polymer* 48 (2007) 1329–1342.

Choi B.K., Kim Y.W., Shin H.K., Ionic conduction in PEO–PAN blend polymer electrolytes, *Electrochimica Acta* 45 (2000) 1371–1374.

Choi N.S., Lee Y.G., Park J.K., Ko J.M., Preparation and Electrochemical characteristics of the Plasticized Polymer electrolyte based on P(VdF–co–HFP)/PVAc blend, *Electrochimica Acta* 46 (2001) 1581–1586.

Choi S.W., Kim J.R., Jo S.M., Lee W.S., Kim Y.-R., Electrochemical and spectroscopic properties of electrospun PAN-based fibrous polymer Electrolytes, *Journal of the Electrochemical Society* 152 (5) (2005) A989–A995.

Chojnacka J., Acosta J.L., Morales E., New gel electrolytes for batteries and supercapacitor applications, *Journal of Power Sources* 97–98 (2001) 819–821.

Chung N.K., Kwon Y.D., Kim D. Thermal, mechanical, swelling, and electrochemical properties of poly(vinylidene fluoride)–co–hexafluoropropylene/poly(ethylene glycol) hybrid-type polymer electrolytes, *Journal of Power Sources* 124 (2003) 148–154.

Cione A.M., Mazyar O.A., Booth B.D., McCabe C., Jennings, G.K., Deposition and wettability of [bmim][triflate] on self-assembled monolayers, *The Journal of Physical Chemistry C* 113 (2009) 2384–2392.

Cohen M.H., Grest G.S., Liquid–glass transition: Dependence of the glass transition on heating and cooling rates, *Physical Review B* 21 (1980) 4113–4117.

Cohen M.H., Turnbull D., Molecular transport in liquids and glasses, *Journal of Chemical Physics* 31 (1959) 1164–1169.

Cooper W., Eaves D.E., Vaughan G., Melting characteristics of isotactic polypropylene oxide, *Polymers* 8 (1967) 273–280.

Costa L.T., Lavall R.L., Borges R.S., Rieumont J., Silva G.G., Ribeiro M.C.C., Polymer electrolytes based on poly(ethylene glycol) dimethyl ether and the ionic liquid 1-butyl-3-methylimidazolium hexafluorophosphate: Preparation, physico-chemical characterization, and theoretical study, *Electrochimica Acta* 53 (4) (2007) 1568–1574.

Costache M.C., Wang D., Heidecker M.J., Manias E., Wilkie C.A., The thermal degradation of poly(methyl methacrylate) nanocomposites with montmorillonite, layered double hydroxides and carbon nanotubes, *Polymers for Advanced Technologies*, 17 (2006) 272–280.

Croce F., Brown S.D., Greenbaum S.G., Slane S.M., Salomon M., Lithium-7 NMR and ionic conductivity studies of gel electrolytes based on polyacrylonitrile, *Chemistry of Materials* 5 (1993) 1268–1272.

Cronin J.P., Tarico D.J., Tonazzi J.C., Agrawal A., Kennedy S.R., Microstructure and properties of sol-gel deposited WO₃ coatings for large area electrochromic windows, *Solar Energy Materials and Solar Cells* 29 (1993) 371–386.

- Czech Z., Pelech R., Thermal degradation of poly(alkyl methacrylates), *Journal of Thermal Analysis and Calorimetry* 101 (2010) 309–313.
- Das S., Bhattacharyya A.J., Influence of water and thermal history on ion transport in lithium salt–succinonitrile plastic crystalline electrolytes, *Solid State Ionics* 181 (2010) 1732–1739.
- De Paoli M.–A., Casalbore–Miceli G., Girotto E.M., Gazotti W.A., All polymeric solid state electrochromic devices, *Electrochimica Acta* 44 (1999) 2983–2991.
- Deka M., Kumar A., Electrical and electrochemical studies of poly(vinylidene fluoride)–clay nanocomposite gel polymer electrolytes for Li–ion batteries, *Journal of Power Sources* 196 (2011) 1358–1364.
- Deepa M., Agnihotry S.A., Gupta D., Chandra R., Ion–pairing effects and ion–solvent–polymer interactions in $\text{LiN}(\text{CF}_3\text{SO}_2)_2$ –PC–PMMA electrolytes: a FTIR study, *Electrochimica Acta* 49 (2004) 373–383.
- Deepa M., Sharma N., Agnihotry S.A., Chandra R., Sekhon S.S., Effect of mixed salts on the properties of gel polymeric electrolytes, *Solid State Ionics* 148 (2002) 451–455.
- Deepa M., Sharma N., Agnihotry S.A., Chandra R., FTIR investigations on ion–ion interactions in liquid and gel polymeric electrolytes: LiCF_3SO_3 –PC–PMMA, *Journal of Materials Science* 37 (2002) 1759–1765.
- Deepa M., Sharma N., Agnihotry S.A., Singh S., Lal T., Chandra R., Conductivity and viscosity of liquid and gel electrolytes based on LiClO_4 , $\text{LiN}(\text{CF}_3\text{SO}_2)_2$ and PMMA, *Solid State Ionics* 152–153 (2002) 253–258.
- Dillip K., Pradhan R.N.P., Choudhary K., Samantaray B.K., Studies of dielectric relaxation and ac conductivity behavior of plasticized polymer nanocomposite electrolytes, *International Journal of Electrochemical Science* 3 (2008) 597–608.
- Dillon D.R., Tenneti K.K., Li C.Y., Ko F.K., Sics I., Hsiao B.S., On the structure and morphology of polyvinylidene fluoride–nanoclay nanocomposites, *Polymer* 47 (2006) 1678–1688.
- Ding Y., Zhang P., Long Z., Jiang Y., Xu F., Di W., The ionic conductivity and mechanical property of electrospun P(VdF–HFP)/PMMA membranes for lithium ion batteries, *Journal of Membrane Science* 329 (2009) 56–59.

Ding M.S., Liquid Phase Boundaries, Dielectric constant, and viscosity of PC–DEC and PC–EC binary carbonates, *Journal of The Electrochemical Society* 150 (2003) A455–A462.

Doll W.W., Lando J.B., Polymorphism of poly(vinylidene fluoride). III. The crystal structure of phase II, *J. Macromol. Sci. B* 4 (1970) 309–329.

Du C.–H., Zhu B.–K., Xu Y.–Y., The effects of quenching on the phase structure of vinylidene fluoride segments in PVDF–HFP copolymer and PVDF–HFP/PMMA blends, *Journal of Materials Science*, 41 (2006) 417–421.

Duarte A.R.C., Silva S.S., Mano J.F., Ionic liquids as foaming agents of semi-crystalline natural-based polymers, *Green Chemistry* 14 (2012) 1949–1955.

Elmer A. M., Jannasch P., Polymer electrolyte membranes by in situ polymerization of poly(ethylene carbonate–co–ethylene oxide) macromonomers in blends with poly(vinylidene fluoride–co–hexafluoropropylene), *Journal of Polymer Science Part B: Polymer Physics* 45 (2007) 79–90.

Fahmy T., Ahmed M.T., Thermal induced structural change investigations in PVC/PEMA polymer blend, *Polymer Testing* 20 (2001) 477–484.

Fan L.–Z., Wang X.–L., Long F., All–solid–state polymer electrolyte with plastic crystal materials for rechargeable lithium–ion battery, *Journal of Power Sources* 189 (2009) 775–778.

Fares M.M., Al-Ta'ani B., Graft copolymerization onto chitosan–I. grafting of ethyl methacrylate using ceric ammonium nitrate as an initiator, *Acta Chimica Slovenica* 50 (2003) 275–285.

Fenton D.E., Parker J.M., Wright P.V., Complexes of alkali metal ions with poly(ethylene oxide), *Polymer* 14 (1973) 589–589.

Fini G., Mirone P., Evidence of short–range orientation effects in dipolar aprotic liquids from vibrational spectroscopy, *Journal of the Chemical Society, Faraday Transactions* 69 (1973) 1243–1248.

Flora X.H., Ulaganathan M., Rajendran S., Influence of lithium salt concentration on PAN–PMMA blend polymer electrolytes, *International Journal of Electrochemical Science* 7 (2012) 7451–7462.

- Frapin B., Effects of engine lubricant additives on fluoroelastomers, *Revue Generale des Caoutchoucs & Plastiques* 672 (1987) 125–131.
- Gamby J., Taberna P.L., Simon P., Fauvarque J.F., Chesneau M., Studies and characterizations of various activated carbons used for carbon/carbon supercapacitors, *Journal of Power Sources* 101 (2001) 109–116.
- Gasa J.V., Weiss R.A., Shaw M.T., Ionic crosslinking of ionomer polymer electrolyte membranes using barium cations, *Journal of Membrane Science* 304 (2007) 173–180.
- Gibbs J.H., Di Marzio E.A., Nature of the glass transition and the glassy state, *Journal of Chemical Physics* 28 (1958) 373–383.
- Gnana Kumar G., Dae Nyung Lee, Pil Kim, Kee Suk Nahm, Nimmaelizabeth R., Poly(Vinylidene fluoride-co-hexa fluoropropylene)/poly vinyl alcohol porous membranes for the application of fuel cells, *Journal of Polymer Research* 16 (2009) 55–61.
- Goetz A. S., Schmutz C. N., Tarascon J. M. (1993). Application: U.S. Patent 93–26904.
- Goetz A.S., Schmutz C.N., Tarascon J.–M. (1994). US Patent 5296318.
- Granqvist C.G. (1995). *Handbook of Inorganic Electrochromic Materials*. Amsterdam: Elsevier.
- Granqvist C.G., Transparent conductive electrodes for electrochromic devices: A review, *Applied Physics A* 57 (1993) 19–24.
- Gray F.M. (Ed.) (1997) *Polymer electrolytes, Chap 1*. (pp. 16–19). Cambridge, UK: Royal Society.
- Gray F.M. (1991). *Solid Polymer Electrolytes – Fundamental and Technological Applications*., USA: VCH Publishers.
- Gray F.M. (1987). In J.R. MacCallum, C.A. Vincent (Eds.), *Polymer Electrolyte Reviews* (pp. 139). New York: Elsevier Applied Science.
- Gregorio R., Cestari J.M., Effect of crystallization temperature on the crystalline phase content and morphology of poly(vinylidene fluoride), *Journal of Polymer Science Part B: Polymer Physics* 32 (1994) 859–870.

Guo M., Fang J., Xu H., Li W., Lu X., Lan C., Li K., Synthesis and characterization of novel anion exchange membranes based on imidazolium-type ionic liquid for alkaline fuel cells, *Journal of Membrane Science* 362 (2010) 97–104.

Han H.-S., Kang H.-R., Kim S.-W., Kim H.-T., Phase-separated polymer electrolyte based on poly(vinyl chloride)/poly(ethyl methacrylate) blend, *Journal of Power Sources* 112 (2002) 461–468.

Hasegawa R., Takahashi Y., Chatani Y., Tadokoro H., Crystal structures of three crystalline forms of poly(vinylidene fluoride), *Polymer Journal* 3 (1972) 600–610.

Hirankumar G., Selvasekarapandian S., Bhuvanewari M.S., Baskaran R., Vijayakumar M., Ag⁺ ion transport studies in a polyvinyl alcohol-based polymer electrolyte system, *Journal of Solid State Electrochemistry* 10 (2006) 193–197.

Hirata T., Kashiwagi T., Brown J.E., Effects of weak linkages on the thermal and oxidative degradation of poly(methyl methacrylates), *Macromolecules* 19 (1986) 2160–2168.

Huang B., Wang Z., Li G., Huang H., Xue R., Chen L., Wang F., Lithium ion conduction in polymer electrolytes based on PAN, *Solid State Ionics* 85 (1996) 79–84.

Huang H., Wunder S.L., Ionic conductivity of microporous PVDF–HFP/PS polymer blends, *Journal of The Electrochemical Society*, 148 (2001) A279–A283.

Huang W., Frech R., Dependence of ionic association on polymer chain length in poly(ethylene oxide)–lithium triflate complexes, *Polymer* 35 (1994) 235–242.

Huang W., Frech R., Raman spectra of PPO–salt Complexes: Mixed cations and mixed anions, *Solid State Ionics* 53 (1992) 1095–1101.

Huczynski A., Janczak J., Brzezinski B., Crystal structure and FT–IR study of aqualithium 1–naphthylmethyl ester of monensin A perchlorate, *Journal of Molecular Structure* 985 (2011) 70–74.

Hummel D.O. (1974). In: Hummel D.O., & Fischer H. (Eds.), *Polymer Spectroscopy*, Weinheim: Verlag Chemie.

Hummel D.O. (1966). *Infrared Spectra of Polymers in the Medium and Long Wavelength Regions*. New York: Wiley.

Hyodo S., Okabayashi K., Raman intensity study of local structure in non-aqueous electrolyte solutions—I. Cation-solvent interaction in LiClO₄/ethylene carbonate, *Electrochimica Acta* 34 (1989) 1551–1556.

Idem (1963). (pp. 234). *Chemical Applications of Infrared Spectroscopy*. New York: Academic Press.

Idris N.H., Rahman M.M., Wang J.-Z., Liu H.K., Microporous gel polymer electrolytes for lithium rechargeable battery application, *Journal of Power Sources* 201 (2012) 294–300.

Idris R., Mohd N.H.N., Arjan N.M., Preparation and characterization of polymer electrolyte system ENR50/PVC/EC/PC/LiN(CF₃SO₂)₂, *Ionics* 13 (2007) 227–230.

Ihonen J., Jaouen F., Lindbergh G., Sundholm G., A novel polymer electrolyte fuel cell for laboratory investigations and in-situ contact resistance measurements, *Electrochimica Acta* 46 (2001) 2899–2911.

Imae T., Fluorinated polymers, *Current Opinion In Colloid & Interface Science* 8 (2003) 307–314.

Inaba A., Kashiwagi T., Brown E.J., Effects of initial molecular weight on thermal degradation of poly(methyl methacrylate). Part 1. Model 1, *Polymer Degradation and Stability* 21 (1988) 1–20.

Jenkins H. D. B., Ionic liquids—An overview, *Science Progress* 94 (2011) 265–297.

Jeon Y., Sung J., Seo C., Lim H., Cheong H., Kang M., Moon B., Ouchi Y., Kim D., Structures of ionic liquids with different anions studied by infrared vibration spectroscopy, *The Journal of Physical Chemistry B* 112 (2008) 4735–4740.

Jiang J., Gao D., Li Z., Su G., Gel polymer electrolytes prepared by in situ polymerization of vinyl monomers in room-temperature ionic liquids, *Reactive and Functional Polymers* 66 (2006) 1141–1148.

Johns K., Stead G., Fluoroproducts—The extremophiles, *Journal of Fluorine Chemistry* 104 (2000) 5–18.

Kandare E., Deng H., Wang D., Hossenlopp J., Thermal stability and degradation kinetics of poly(methyl methacrylate)/layered copper hydroxyl methacrylate composites, *Polymers for Advanced Technologies* 17 (2006) 1–23.

Kang S.W., Char K., Kim J.H., Kim C.K., Kang Y.S., Control of ionic interactions in silver salt–polymer complexes with ionic liquids: Implications for facilitated olefin transport, *Chemistry of Materials* 18 (2006) 1789–1794.

Karan N.K., Pradhan D.K., Thomas R., Natesan B., Katiyar R.S., Solid polymer electrolytes based on PEO–LiCF₃SO₃: Ionic conductivity and dielectric relaxation, *Solid State Ionics* 179 (2008) 689–696.

Kashiwagi T., Inaba A., Behavior of primary radicals during thermal degradation of poly(methyl methacrylate), *Polymer Degradation and Stability* 26 (1989) 161–184.

Kashiwagi T., Inaba A., Brown E.J., Effects of weak linkages on the thermal and oxidative degradation of poly(methyl methacrylates), *Macromolecules* 19 (1986) 2160–2168.

Kaya I., Ozdemir E., Thermodynamic interactions and characterization of poly(ethyl methacrylate) by inverse gas chromatography, *Macromolecular Reports*, A32 (1995) 377–383.

Kelly I., Owen J., Steele B.C.H., Poly(ethylene oxide) electrolytes for operation at near room temperature, *Journal of Power Sources* 14 (1985) 13–21.

Kim D.–W., Sun Y.–K. Electrochemical characterization of gel polymer electrolytes prepared with porous membranes, *Journal of Power Sources* 102 (2001) 41–45.

Kim K.–S., Park S.–Y., Choi S., Lee H., Ionic liquid–polymer gel electrolytes based on morpholinium salt and PVdF(HFP) copolymer, *Journal of Power Sources* 155 (2006) 385–390.

Kim K.M., Park N.–G. Ryu K.S., Chang S.H., Characteristics of PVdF–HFP/TiO₂ composite membrane electrolytes prepared by phase inversion and conventional casting methods, *Electrochimica Acta* 51 (2006) 5636–5644.

Kobayashi M., Tashiro K., Tadokoro H., Molecular vibrations of three crystal forms of poly(vinylidene fluoride), *Macromolecules* 8 (2) (1975) 158–171.

Kosmulski M., Gustafsson J., Rosenholm J.B., Thermal stability of low temperature ionic liquids revisited, *Thermochimica Acta* 412 (2004) 47–53.

Kubo W., Kitamura T., Hanabusa K., Wada Y., Yanagida S., Quasi-solid-state dye-sensitized solar cells using room temperature molten salts and a low molecular weight gelator, *Chemical Communications* 4 (2002) 374–375.

Kucharski M., Lukaszewicz T., Mrozek P., New electrolyte for electrochromic devices, *Opto-Electronics Review* 12 (2004) 175–180.

Kumar A., Saikia D., Singh F., Avasthi D.K., Li³⁺ ion irradiation effects on ionic conduction in P(VDF-HFP)-(PC+DEC)-LiClO₄ gel polymer electrolyte, *Solid State Ionics* 177 (2006) 2575–2579.

Kumar A., Deka M., Banerjee S., Enhanced ionic conductivity in oxygen ion irradiated poly(vinylidene fluoride-hexafluoropropylene) based nanocomposite gel polymer electrolytes, *Solid State Ionics* 181 (2010) 609–615.

Kumar B., Scanlon L.G., Polymer-ceramic composite electrolytes, *Journal of Power Sources* 52 (1994) 261–268.

Kumar R., Sharma J.P., Sekhon S.S., FTIR study of ion dissociation in PMMA based gel electrolytes containing ammonium triflate: Role of dielectric constant of solvent, *European Polymer Journal* 41 (2005) 2718–2725.

Kumutha K., Alias Y., FTIR spectra of plasticized grafted natural rubber-LiCF₃SO₃ electrolytes, *Spectrochimica Acta A* 64 (2006) 442–447.

Kumutha K., Alias Y., Said R., FTIR and thermal studies of modified natural rubber based polymer electrolytes, *Ionics* 11 (2005) 472–476.

Kuo S.W., Chang F.C., Studies of miscibility behaviour and hydrogen bonding in blends of poly(vinylphenol) and poly(vinylpyrrolidone), *Macromolecules* 34 (2001) 5224–5228.

Lalia B.S., Yamada K., Hundal M.S., Park J.-S., Park G.-G., Lee W.-Y., Kim C.-S., Sekhon S.S., Physicochemical studies of PVdF-HFP-based polymer-ionic liquid composite electrolytes, *Applied Physics A* 96 (2009) 661–670.

Lando J.B., Olf H.G., Peterlin A., Nuclear magnetic resonance and x-ray determination of the structure of poly(vinylidene fluoride), *Journal of Polymer Science* 4 (1966) 941–951.

- Lewandowska K., Miscibility and thermal stability of poly(vinyl alcohol)/chitosan mixtures, *Thermochimica Acta* 493 (2009) 42–48.
- Lewandowski A., Swiderska A., New composite solid electrolytes based on a polymer and ionic liquids, *Solid State Ionics* 169 (2004) 21–24.
- Lee E.M., Lee H.W., Park J.H., Han Y.A., Ji B.C., Oh W., Deng Y., Yeum J.H., Multihollow structured poly(methyl methacrylate)/silver nanocomposite microspheres prepared by suspension polymerization in the presence of dual dispersion agents, *Colloid and Polymer Science* 286 (2008) 1379–1385.
- Lee E.S., DiBartolomeo D.L., Application issues for large-area electrochromic windows in commercial buildings, *Solar Energy Materials and Solar Cells* 71 (2002) 465–491.
- Lee W.K., Cho W.J., Ha C.S., Takahara A., Kajiyama T., Surface enrichment of the solution-cast poly(methyl methacrylate)/poly(vinyl acetate) blends, *Polymer* 36 (1996) 1229–1234.
- Li N., Zhang S., Li X., Yu L. Zheng L., Effect of polyethylene glycol (PEG-400) on the 1-butyl-3-methylimidazolium tetrafluoroborate-in-cyclohexane ionic liquid microemulsion, *Colloid & Polymer Science* 287 (2009) 103–108.
- Li Z., Su G., Gao D., Wang X., Li X., Effect of Al₂O₃ nanoparticles on the electrochemical characteristics of P(VDF - HFP) - based polymer electrolyte, *Electrochimica Acta* 49 (2004) 4633–4639.
- Lorimer J.W., Macrocyclic ligand-ion interactions as models for ion-polymer interactions in solid polymer electrolytes, *Pure and Applied Chemistry* 65 (1993) 1499–1506.
- Ludwig R., Kragl U., Do we understand the volatility of ionic liquids? *Angewandte Chemie International Edition* 46 (2007) 6582–6584.
- MacFarlane D.R., Meakin P., Bishop A., McNaughton D., Rosaliet J.M., Forsyth M., Ftir study of ion-pairing effects in plasticized polymer electrolytes, *Electrochimica Acta* 40 (1995) 2333–2337.
- Marco G.D., Lanza M., Pierceccini M., Influence of poly(ethylene glycol)methacrylate on the morphology and conductivity of poly(ethylene oxide)-sodium thiocyanate complexes, *Solid State Ionics* 89 (1996) 117–125.

Malathi J., Kumaravadivel M., Brahmanandhan G.M., Hema M., Baskaran R., Selvasekarapandian S., Structural, thermal and electrical properties of PVA–LiCF₃SO₃ polymer electrolyte, *Journal of Non–Crystalline Solids* 356 (2010) 2277–2281.

Malhotra S.L., Ly Minh, Blanchard L.P., Thermal decomposition and glass transition temperature of poly(ethyl methacrylate) and poly(n–butyl methacrylate), *Journal of Macromolecular Science–Chemistry* 19 (1983) 559–578.

Manring L., Thermal degradation of poly(methyl methacrylate). 4. Random side–group scission, *Macromolecules* 24 (1991) 3304–3309.

Manuel Stephan A., Nahm K.S., Prem Kumar T., Anbu Kulandainathan M., Ravi G., J. Wilson, Nanofiller incorporated poly(vinylidene fluoride–hexafluoropropylene) (PVdF–HFP) composite electrolytes for lithium batteries, *Journal of Power Sources* 159 (2006) 1316–1321.

Manuel Stephan A., Gopu Kumar S., Renganathan N.G., Anbu Kulandainathan M., Characterization of poly(vinylidene fluoride–hexafluoropropylene) (PVdF–HFP) electrolytes complexed with different lithium salts, *European Polymer Journal* 41 (2005) 15–21.

Marcilla A., Beltran M., Garcia J.C., Mang D., Fusion behavior of plastisols of PVC studied by ATR–FTIR, *Journal of Vinyl and Additive Technology* 1 (1995) 10–14.

Martinelli A., Matic A., Jacobsson P., Börjesson L., Navarra M.A., Panero S., Scrosati B., A structural study on ionic–liquid–based polymer electrolyte membranes, *Journal of The Electrochemical Society* 154 (2007) G183–G187.

Masetti E., Dini D., Decker F., The electrochromic response of tungsten bronzes M_xWO₃ with different ions and insertion rates, *Solar Energy Materials and Solar Cells* 39 (1995) 301–307.

Masia M., Probst M., Rey R. Ethylene Carbonate–Li⁺: A theoretical study of structural and vibrational properties in gas and liquid phases, *Journal of Physical Chemistry B* 108 (2004) 2016–2027.

Meschede A., Scharf T., Krebs H.–U., Samwer K., Mechanical spectroscopy of laser deposited polymers, *Applied Physics A* 93 (2008) 599–603.

Michael M.S., Prabakaran S.R.S., Rechargeable lithium battery employing new ambient temperature hybrid polymer electrolyte based on PVK + PVdF–HFP(co–polymer), *Journal of Power Sources* 136 (2004) 408–415.

- Miyamoto T., Shibayama K., Free-volume model for ionic conductivity in polymers, *Journal of Applied Physics* 44 (1973) 5372–5376.
- Money B.K., Swenson J., Dynamics of poly(ethylene oxide) around its melting temperature, *Macromolecules* 46 (2013) 6949–6954.
- Monk P.M.S., Mortimer R.J., & Rosseinsky D.R. (1995). *Electrochromism—Fundamentals and applications*. Weinheim: VCH.
- Montermoso J.C., Fluorine-containing elastomers, *Rubber Chemistry and Technology* 34 (1961) 1521–1522.
- Morra B.S., Stein R.S., Morphological studies of poly(vinylidene fluoride) and its blends with poly(methyl methacrylate), *Journal of Polymer Science* 20 (1982) 2261–2275.
- Nakamoto K., (1978) (pp. 111). (3rd Ed.). New York: John Wiley & Sons.
- Nath A.K., Kumar A., Ionic transport properties of PVdF–HFP–MMT intercalated nanocomposite electrolytes based on ionic liquid, 1-butyl-3-methylimidazolium bromide, *Ionics*, 19 (2013) 1391–1403.
- Ngo, H.L., LeCompte, K., Hargens, L., McEwen, A.B., Thermal properties of imidazolium ionic liquids, *Thermochimica Acta* 357–358 (2000) 97–102.
- Nguyen C.A., Xiong S., Ma J., Lu X., Lee P.S., High ionic conductivity P(VDF–TrFE)/PEO blended polymer electrolytes for solid electrochromic devices, *Physical Chemistry Chemical Physics* 13 (2011) 13319–13326.
- Nicotera I., Coppola L., Oliviero C., Castriota M., Cazzanelli E., Investigation of ionic conduction and mechanical properties of PMMA–PVdF blend-based polymer electrolytes, *Solid State Ionics* 177 (2006) 581–588.
- Ohno H., Yoshizawa M., Ion conductive characteristics of ionic liquids prepared by neutralization of alkylimidazoles, *Solid State Ionics* 154–155 (2002) 303–309.
- Osman Z., Ansor N.M., Chew K.W., Kamarulzaman N., A comparative study of lithium and sodium salts in PAN-based ion conducting polymer electrolytes, *Ionics* 11 (2005) 431–435.

- Osman Z., Arof A.K., FTIR studies of chitosan acetate based polymer electrolytes, *Electrochimica Acta* 48 (2003) 993–999.
- Osman Z., Ibrahim Z.A., Arof A.K., Conductivity enhancement due to ion dissociation in plasticized chitosan based polymer electrolytes, *Carbohydrate Polymers* 44 (2001) 167–173.
- Ohtani H., Ishimura S., Kumai M., Thermal decomposition behaviors of imidazolium-type ionic liquids studied by pyrolysis–gas chromatography, *Analytical Sciences* 24 (2008) 1335–1340.
- Ouaad K., Djadoun S., Vincent L., Sbirrazzuoli N., Elaboration and thermal behavior of nanocomposites based on poly(ethyl methacrylate) and an Algerian bentonite prepared via in situ polymerization initiated by Ni(II) α -benzoinoxime complex, *Thermochimica Acta* 555 (2013) 30–36.
- Pandey G.P., Hashmi S.A., Experimental investigations of an ionic–liquid–based, magnesium ion conducting, polymer gel electrolyte, *Journal of Power Sources* 187 (2009) 627–634.
- Papaiconomou N., Estager J., Traore Y., Bauduin P., Bas C., Legeai S., Viboud S., Draye M., Synthesis, physicochemical properties, and toxicity data of new hydrophobic ionic liquids containing dimethylpyridinium and trimethylpyridinium cations, *Journal of Chemical & Engineering Data* 55 (2010) 1971–1979.
- Pennarun P., Jannasch P., Influence of the alkali metal salt on the properties of solid electrolytes derived from a Lewis acidic polyether, *Solid State Ionics* 176 (2005) 1849–1859.
- Pielichowski K., Hamerton I., Compatible poly(vinyl chloride)/chlorinated polyurethane blends: thermal characteristics, *European Polymer Journal*, 36 (2000) 171–181.
- Polu A.R., Kumar R., Ionic conductivity and discharge characteristic studies of PVA–Mg(CH₃COO)₂ solid polymer electrolytes, *International Journal of Polymeric Materials* 62 (2013) 76–80.
- Rajendran S., Ramesh Prabhu M., Effect of different plasticizer on structural and electrical properties of PEMA based polymer electrolytes, *Journal of Applied Electrochemistry* 40 (2010) 327–332.

Rajendran S., Ramesh Prabhu M., Usha Rani M., Characterization of PVC/PEMA based polymer blend electrolytes, *International Journal of Electrochemical Science* 3 (2008) 282–290.

Rajendran S., Ramesh Prabhu M., Usha Rani M., Ionic conduction in poly(vinyl chloride)/poly(ethyl methacrylate)-based polymer blend electrolytes complexed with different lithium salts, *Journal of Power Sources* 180 (2008) 880–883.

Rajendran S., Ramesh Prabhu M., Usha Rani M., Li ion conduction behavior of hybrid polymer electrolytes based on PEMA, *Journal of Applied Polymer Science* 110 (2008) 2802–2806.

Rajendran S., Sivakumar P., An investigation of PVdF/PVC-based blend electrolytes with EC/PC as plasticizers in lithium battery applications, *Physica B* 403 (2008) 509–516.

Rajendran S., Uma T., Conductivity studies on PVC/PMMA polymer blend electrolyte, *Materials Letters* 44 (2000), 242–247.

Ramenskaya L.M., Grishina E.P., Kraeva O.V., Manin N.G., Interaction of ionic liquids based on 1-butyl-3-methylimidazolium cation with hydrated cellulose according to the data of infrared spectroscopy, *Russian Journal of General Chemistry* 82 (2012) 1573–1576.

Ramesh S., Liew Chiam Wen, Investigation on the effects of addition of SiO₂ nanoparticles on ionic conductivity, FTIR, and thermal properties of nanocomposite PMMA–LiCF₃SO₃–SiO₂, *Ionics* 16 (2010) 255–262.

Ramesh S., Liew Chiam Wen, Ramesh K., Evaluation and investigation on the effect of ionic liquid onto PMMA–PVC gel polymer blend electrolytes, *Journal of Non-Crystalline Solids* 357 (2011) 2132–2138.

Ramesh S. Lu S.-C., Enhancement of ionic conductivity and structural properties by 1-butyl-3-methylimidazolium trifluoromethanesulfonate ionic liquid in poly(vinylidene fluoride–hexafluoropropylene)-based polymer electrolytes, *Journal of Applied Polymer Science* 126 (2012) E484–E-492.

Ramesh S., Tai F.Y., Chia J.S., Conductivity and FTIR studies on PEO–LiX [X: CF₃SO₃⁻, SO₄²⁻] polymer electrolytes, *Spectrochimica Acta A* 69 (2008) 670–675.

Ramesh S., Yahaya A.H., Arof A.K., Dielectric behavior of PVC based polymer electrolytes, *Solid State Ionics* 152–153 (2002) 291–294.

- Ramesh S., Yahaya A.H., Arof A.K., Miscibility studies of PVC blends (PVC/PMMA and PVC/PEO based polymer electrolytes *Solid State Ionics* 148 (2002) 483–486.
- Rao C.N.R. (1963). (pp. 234). *Chemical applications of infrared spectroscopy*. New York: Academic Press.
- Raphael E., Avellaneda C.O., Manzolli B., Pawlicka A., Agar-based films for application as polymer electrolytes, *Electrochimica Acta* 55 (2010) 1455–1459.
- Ratner M.A. (1987). Aspects of the theoretical treatment of polymer solid electrolytes: Transport theory and models. In MacCallum J.R., Vincent C.A. (Eds.), *Polymer electrolyte reviews I* (pp. 173). London and New York: Elsevier Applied Science.
- Reddy M.J., Sreekanth T. Rao U.V.S., Study of the plasticizer effect on a (PEO + NaYF₄) polymer electrolyte and its use in an electrochemical cell, *Solid State Ionics* 126 (1999) 55–63.
- Reiter J., Dominko R., Nadherná M., Jakubec I., Ion-conducting lithium bis(oxalato)borate-based polymer electrolytes, *Journal of Power Sources* 189 (2009) 133–138.
- Reiter J., Krejza O., Sedlarikova M., Electrochromic devices employing methacrylate-based polymer electrolytes, *Solar Energy Materials and Solar Cells* 93 (2009) 249–255.
- Reiter J., Michalek J., Vondrak J., Chmelikova D., Pradny M., Micka Z., Poly(ethyl methacrylate) and poly(2-ethoxyethyl methacrylate) based polymer gel electrolytes, *Journal of Power Sources* 158 (2006) 509–517.
- Reiter J., Velicka J., Mika M., Proton-conducting polymer electrolytes based on methacrylates, *Electrochimica Acta* 53 (2008) 7769–7774.
- Renard I., Li H., Marsan B., Ionic properties of non-aqueous liquid and PVDF-based gel electrolytes containing a cesium thiolate/disulfide redox couple, *Electrochimica Acta* 48 (2003) 831–844.
- Rey I., Johansson P., Lindgren J., Lassegues J.C., Grondin J., Servant L., Spectroscopic and theoretical study of (CF₃SO₂)₂N[−] (TFSI[−]) and (CF₃SO₂)₂NH (HTFSI), *The Journal of Physical Chemistry A* 102 (1998) 3249–3258.
- Rhodes C.P., Frech R., Cation-anion and cation-polymer interactions in (PEO)_nNaCF₃SO₃ (n=1–80), *Solid State Ionics* 121 (1999) 91–99.

Rhoo H.-J., Kim H.-T., Park J.-K., Hwang T.-S., Ionic conduction in plasticized PVC/PMMA blend polymer electrolytes, *Electrochimica Acta* 42 (1997) 1571–1579.

Ross Macdonald J., & Johnson W.B. (2005). In Barsoukov E., & Ross Macdonald J. (Eds.), *Impedance spectroscopy theory, experiment, and applications—Fundamentals of impedance spectroscopy* (2nd ed.). New Jersey: John Wiley & Sons.

Rosseinsky D., Mortimer R.J., Electrochromic systems and the prospects for devices, *Advanced Materials*, 13 (2001) 783–793.

Jaipal Reddy M., Sreekanth T., Subba Rao U.V., Study of the plasticizer effect on a (PEO+NaYF₄) polymer electrolyte and its use in an electrochemical cell, *Solid State Ionics* 126 (1999) 55–63.

Sahoo P.K., Rana P.K., Synthesis and biodegradability of starch-g-ethyl methacrylate / sodium acrylate/sodium silicate Superabsorbing Composite, *Journal of Materials Science* 41 (2006) 6470–6475.

Saikia D., Han C.C., Chen-Yang, Y. W. Influence of polymer concentration and dyes on photovoltaic performance of dye-sensitized solar cell with P(VdF-HFP)-based gel polymer electrolyte, *Journal of Power Sources* 185 (2008) 570–576.

Saikia D., Kumar A., Ionic conduction in P(VDF-HFP)/PVDF-(PC + DEC)-LiClO₄ polymer gel electrolytes, *Electrochimica Acta* 49 (2004) 2581–2589.

Saikia D., Kumar A., Ionic transport in P(VDF-HFP)-PMMA-LiCF₃SO₃-(PC + DEC)-SiO₂ composite gel polymer electrolyte, *European Polymer Journal* 41 (2005) 563–568.

Saikia D., Wu H.-Y., Pan Y.-C., Lin C.-P., Huang K.-P., Chen K.-N., Fey George T.K., Kao H.-M., Highly conductive and electrochemically stable plasticized blend polymer electrolytes based on PVdF-HFP and triblock copolymer PPG-PEG-PPG diamine for Li-ion batteries, *Journal of Power Sources* 196 (2011) 2826–2834.

Saito Y., Capiglia C., Kataoka H., Yamamoto H., Ishikawa H., Mustarelli P., Conduction properties of PVDF-type polymer electrolytes with lithium salts, LiN(CF₃SO₂)₂ and LiN(C₂F₅SO₂)₂, *Solid State Ionics* 136–137 (2000) 1161–1166.

Schechter A., Savinell R.F., Imidazole and 1-methyl imidazole in phosphoric acid doped polybenzimidazole, electrolyte for fuel cells, *Solid State Ionics* 147 (2002) 181–187.

Schindler W., Zerda T.W., Jonas J., High pressure Raman study of intermolecular interactions and Fermi resonance in liquid ethylene carbonate, *The Journal of Chemical Physics* 81 (1984) 4306–4313.

Schmiegel W.W., Logothetis A.L., Curing of vinylidene fluoride based fluoroelastomers, *ACS Symposium Series, Polymers for Fibers and Elastomers* 260 (1984) 159–182.

Seddon K.R., Ionic liquids: A taste of the future, *Nature Materials* 2 (2003) 363–365.

Sellam, Hashmi S.A., Enhanced zinc ion transport in gel polymer electrolyte: Effect of nano-sized ZnO dispersion, *Journal of Solid State Electrochemistry* 16 (2012) 3105–3114.

Shalu, Chaurasia S.K., Singh R.K., Chandra S., Thermal stability, complexing behavior, and ionic transport of polymeric gel membranes based on polymer PVdF–HFP and ionic liquid, [BMIM][BF₄], *The Journal of Physical Chemistry B* 117 (2013) 897–906.

Sharma J.P., Yamada K., Sekhon S.S., Conductivity study on PEO based polymer electrolytes containing hexafluorophosphate Anion: Effect of plasticizer 315 (2012) 188–197.

Shi F., Deng Y., Abnormal FT–IR and FT-Raman spectra of ionic liquids confined in nano-porous silica gel, *Spectrochimica Acta Part A* 62 (2005) 239–244.

Shin J.–H., Henderson W.A., Passerini S., PEO–Based polymer electrolytes with ionic liquids and their use in lithium metal–polymer electrolyte batteries, *Journal of Electrochemical Society* 152 (2005) A978–A983.

Shukla M., Srivastava N., Saha S., Theoretical and spectroscopic studies of 1–butyl–3–methylimidazolium iodide room temperature ionic liquid: Its differences with chloride and bromide derivatives, *Journal of Molecular Structure* 975 (2010) 349–356.

Sim L.H., Gan S.N., Chan C.H., Yahya R., ATR–FTIR studies on ion interaction of lithium perchlorate in polyacrylate/poly(ethylene oxide) blends, *Spectrochimica Acta A* 76 (2010) 287–292.

Sim L.N., Majid S.R., Arof A.K., Characteristics of PEMA/PVdF–HFP blend polymeric gel films incorporated with lithium triflate salt in electrochromic device, *Solid State Ionics* 209–210 (2012) 15–23.

- Sim L.N., Majid S.R., Arof A.K., FTIR studies of PEMA/PVdF–HFP blend polymer electrolyte system incorporated with LiCF_3SO_3 salt, *Vibrational Spectroscopy* 58 (2012) 57–66.
- Singh P.K., Kim K.–W., Rhee H.W., Development and characterization of ionic liquid doped solid polymer electrolyte membranes for better efficiency, *Synthetic Metals* 159 (2009) 1538–1541.
- Singh P.K., Kim K.–W., Rhee H.W., Electrical, optical and photoelectrochemical studies on a solid PEO–polymer electrolyte doped with low viscosity ionic liquid, *Electrochemistry Communications* 10 (2008) 1769–1772.
- Sivakumar M., Subadevi R., Rajendran S., Wu H.–C., Wu N.–L., Compositional effect of PVdF–PEMA blend gel polymer electrolytes for lithium polymer batteries, *European Polymer Journal* 43 (2007) 4466–4473.
- Smyrl W.H., Lien M. (1993). In B. Scrosati (Ed.), *Application of Electroactive Polymers*, London: Chapman & Hall.
- Srivastava N., Chandra S., Studies on a new proton conducting polymer system: poly(ethylene succinate)+ NH_3ClO_4 , *European Polymer Journal* 36 (2000) 421–433.
- Shukla M., Srivastava N., & Saha S. (2011). Ionic liquids–Classes and properties. In Handy S.T. (Ed.), *Interactions and transitions in imidazolium cation based ionic liquids*. InTech CC BY.
- Starkey S.R., Frech R., Plasticizer interactions with polymer and salt in propylene carbonate–poly(acrylonitrile)–lithium triflate, *Electrochimica Acta* 42 (1997) 471–474.
- Stuart B.H. (2004). *Infrared Spectroscopy: Fundamentals and Applications*. England: Wiley.
- Subban R.H.Y., Arof A.K., Plasticiser interactions with polymer and salt in PVC– LiCF_3SO_3 –DMF electrolytes, *European Polymer Journal* 40 (2004) 1841–1847.
- Suleman M., Kumar Y., Hashmi S.A., Structural and electrochemical properties of succinonitrile–based gel polymer electrolytes: Role of ionic liquid addition, *The Journal of Physical Chemistry B* 117 (2013) 7436–7443.

Suttiruengwong S., Sricharussin W., Conductivity and dynamic mechanical studies of PVC/PEMA blend polymer electrolytes, *Advanced Materials Research* 93–94 (2010) 429–432.

Tang M., Liao W.R., Solvent effect on the miscibility of poly(4-hydroxystyrene)–poly(ethylene oxide) blends, *European Polymer Journal* 36 (2000) 2597–2603.

Tang Z., Qi L., Gao G., Dynamic mechanical properties of gel polymer electrolytes containing ionic liquid, *Solid State Ionics* 179 (2008) 1880–1884.

Tarascon J.–M., Gozdz A.S., Schmutz C., Shokoohi F., Warren P.C., Performance of Bellcore's plastic rechargeable Li–ion batteries, *Solid State Ionics* 86–88 (1996) 49–54.

Tokuda, H., Hayamizu, K., Ishii, K., Susan, M.A.B.H., Watanabe, M., Physicochemical properties and structures of room–temperature ionic liquids. 3. Variation of cationic structures, *The Journal of Physical Chemistry B* 108 (2004) 16593–16600.

Tripathy S.K., Potenzzone Jr. R., Hopfinger A.J., Banik N.C., Taylor P.L., Predicted chain conformation for a possible phase III form of poly(vinylidene fluoride), *Macromolecules* 12 (1979) 656–658.

Ueki T., Watanabe M., Macromolecules in ionic liquids: Progress, challenges, and opportunities, *Macromolecules* 41 (2008) 3739–3749.

Ulaganathan M., Mathew C.M., Rajendran S., Highly porous lithium–ion conducting solvent–free poly(vinylidene fluoride–co–hexafluoropropylene)/poly(ethyl methacrylate) based polymer blend electrolytes for Li battery applications, *Electrochimica Acta* 93 (2013) 230–235.

Ulaganathan M., Rajendran S., Preparation and characterizations of PVAc/P(VdF–HFP)–based polymer blend electrolytes, *Ionics* 16 (2010), 515–521.

Uma T., Mahalingam T., Rajendran S., Ulrich Stimming, Structural and ionic conductivity studies of solid polymer electrolytes based on poly(vinylchloride) and poly(methyl methacrylate) blends, *Ionics* 9 (2003) 274–281.

Vaivars G., Furlani M., Mellander B.–E., Granqvist C.G., Proton–conducting zirconium phosphate/poly(vinyl acetate)/glycerine gel electrolytes, *Journal of Solid State Electrochemistry* 7 (2003) 724–728.

Venkatesh G.M., Gilbert R.D., Fornes R.E., Fourier transform infra-red spectroscopy of nylon-6 blends: binary blends with poly(methyl methacrylate) and ethylene vinyl ester/alcohol copolymer, *Polymer* 26 (1985) 45–49.

Vieira D.F., Avellaneda C.O., Pawlicka A., Conductivity study of a gelatin-based polymer electrolyte, *Electrochimica Acta* 53 (2007) 1404–1408.

Wang F., Li C.X., Wang Z.H., Li Z.J., Jiang Y.B., Vapor pressure measurement for water, methanol, ethanol, and their binary mixtures in the presence of an ionic liquid 1-ethyl-3-methylimidazolium dimethylphosphate, *Fluid Phase Equilibria* 255 (2007) 186–192.

Wang J., Wu Y., Xuan X., Wang H., Ion-molecule interactions in solutions of lithium perchlorate in propylene carbonate + diethyl carbonate mixtures: an IR and molecular orbital study, *Spectrochimica Acta Part A* 58 (2002) 2097–2104.

Wang Q., Ping P., Zhao X., Chu G., Sun J., Chen C., Thermal runaway caused fire and explosion of lithium ion battery, *Journal of Power Sources* 208 (2012) 210–224.

Wang Z., Huang B., Huang H., Chen L., Xue R., Wang F., Infrared spectroscopic study of the interaction between lithium salt LiClO_4 and the plasticizer ethylene carbonate in the polyacrylonitrile-based electrolyte, *Solid State Ionics* 85 (1996) 159–162.

Wang Z.-L., Tang Z.-Y., A novel polymer electrolyte based on PMAML/PVDF-HFP blend, *Electrochimica Acta* 49 (2004) 1063–1068.

Wang Z., Huang B., Xue, R., Huang X., Chen L., Spectroscopic investigation of interactions among components and ion transport mechanism in polyacrylonitrile based electrolytes, *Solid State Ionics* 121 (1999) 141–156.

Wang Z. L., Tang Z. Y., Research on the interfacial properties of polymer electrolyte by a.c. impedance, *Acta Physico-Chimica Sinica* 19 (2003) 1097–1101.

Wilkes, J. S., Zaworotko, M. J., Air and water stable 1-ethyl-3-methylimidazolium based ionic liquids, *Journal of the Chemical Society, Chemical Communications* (1992) 965–967.

Wilson A.S. (1995). *Plasticizers principles and practice*. Cambridge: The Institute of Materials.

Wilson J., Ravi G., Anbu Kulandainathan M., Electrochemical studies on inert filler incorporated poly(vinylidene fluoride–hexafluoropropylene) (PVdF–HFP) composite electrolytes, *Polimeros: Ciencia e Tecnologia* 16 (2006) 88–93.

Winie T., Arof A.K., FT–IR studies on interactions among components in hexanoyl chitosan–based polymer electrolytes, *Spectrochimica Acta A* 63 (2006) 677–684.

Wintersgill M.C., & Fontanella J.J. (1987). Low–frequency dielectric properties of polyether electrolytes. In MacCallum J.R., & Vincent C.A. (Eds.), *Polymer Electrolyte Reviews – 2*. (pp. 43–60). London: Elsevier.

Wu C.–G., Lu M.–I., Tsai C.–C., Chuang H.–J., PVdF–HFP/metal oxide nanocomposites: The matrices for high–conducting, low–leakage porous polymer electrolytes, *Journal of Power Sources* 159 (2006) 295–300.

Wu F., Feng T., Bai Y., Wu C., Ye L., Feng Z., Preparation and characterization of solid polymer electrolytes based on PHEMO and PVDF–HFP, *Solid State Ionics* 180 (2009) 677–680.

Wu Y.C., Feng D., The second dissociation constant of sulfuric acid at various temperatures by the conductometric method, *Journal of Solution Chemistry* 24 (1995) 133–144.

Xi J., Qiu X., Li J., Tang X., Zhu W., Chen L., PVdF–PEO blends based microporous polymer electrolyte: Effect of PEO on pore configurations and ionic conductivity, *Journal of Power Sources* 157 (2006) 501–506.

Xu K., Nonaqueous liquid electrolytes for lithium–based rechargeable batteries, *Chemical Reviews* 104 (2004) 4303–4417.

Xu H., Zhao D., Xu P., Liu F., Gao G., Conductivity and viscosity of 1–allyl–3–methyl–imidazolium chloride + water and + ethanol from 293.15 K to 333.15 K, *Journal of Chemical & Engineering Data* 50 (2005) 133–135.

Xuan X., Wang J., Tang J., Qu G., Lu J., Vibrational spectroscopic studies on ion solvation of lithium perchlorate in propylene carbonate + N,N–dimethylformamide mixtures, *Spectrochimica Acta A* 56 (2000) 2131–2139.

Yang Y., Zhou C.–H., Xu S., Hu H., Chen B.–L., Zhang J., Wu S.–J., Liu W., Zhao X.–Z., Improved stability of quasi–solid state dye–sensitized solar cell based on poly(ethylene oxide)–poly(vinylidene fluoride) polymer–blend electrolytes, *Journal of Power Sources* 185 (2008) 1492–1498.

Ye H., Huang J., Xu J.J., Khalfan A., Greenbaum S., Li ion conducting polymer gel electrolytes based on ionic liquid/PVDF–HFP blends, *Journal of The Electrochemical Society* 154 (2007) A1048–A1057.

Yeon S.–H., Kim K.–S., Choi S., Cha J.–H., Lee H., Characterization of PVdF(HFP) gel electrolytes based on 1–(2–hydroxyethyl)–3–methyl imidazolium ionic liquids, *The Journal of Physical Chemistry B* 109 (2005) 17928–17935.

Yeon S.–H., Kim K.–S., Choi S., Cha J.–H., Lee H., Oh J., Lee B.–B., Poly(vinylidene fluoride)–hexafluoropropylene gel electrolytes based on N–(2–hydroxyethyl)–N–methyl morpholinium ionic liquids, *Korean Journal of Chemical Engineering* 23 (2006) 940–947.

Yi S., Zhang F., Li W., Huang C., Zhang H., Pan M., Anhydrous elevated–temperature polymer electrolyte membranes based on ionic liquids, *Journal of Membrane Science* 366 (2011) 349–355.

York S., Frech, Snow A., Glatzhofer D., A comparative vibrational spectroscopic study of lithium R. triflate and sodium triflate in linear poly(ethylenimine), *Electrochimica Acta* 46 (2001) 1533–1537.

Zanotto A., Luyt A.S., Spinella A., Caponetti E., Improvement of interaction in and properties of PMMA–MWNT nanocomposites through microwave assisted acid treatment of MWNT, *European Polymer Journal* 49 (2013) 61–69.

Zhang H.P., Zhang P. Li Z.H., Sun M., Wu Y.P., Wu H.Q., A novel sandwiched membrane as polymer electrolyte for lithium ion battery, *Electrochemistry Communications* 9 (2007) 1700–1703.

Zhou Z., Li S., Zhang Y., Liu M., Li W., Promotion of proton conduction in polymer electrolyte membranes by 1H–1, 2,3–triazole, *Journal of the American Chemical Society* 127 (2005) 10824–10825.