Prof. M.A.K.L. Dissanayake CV Part II
Research Publications & Dissemination of Knowledge

Contents

Research Publications (up to July 2014)

	1. Research Publications in Scholarly Journals	
No.	**Paper**	**J Type**
1.	Optical Properties of CrO_2, MoO_2 and WO_2 from 0.2 eV to 6.0 eV. M. A. K. L. Dissanayake and L. L. Chase, **Phys. Rev. B18 (1978) 6872.** ISSN: 1098-0121	SCI
2.	Thermoreflectance Spectra of CrO_2 from 0.5 eV to 6.0 eV. M. A. K. L. Dissanayake and L. L. Chase, **Phys. Rev. B23 (1981) 6254.** ISSN: 1098-0121	SCI
3.	Phase Diagram and Electrical Conductivity of the Li_2SO_4 - Li_2CO_3 System. M. A. K. L. Dissanayake and B. -E. Mellaneder, **Solid State Ionics 21 (1986) 279.** ISSN: 0167-2738	SCI
4.	Electrical Conductivity of the Na_2SO_4 - Li_2CO_3 System. M. A. K. L. Dissanayake, **Solid State Ionics 23 (1987) 49.** ISSN: 0167-2738	SCI
5.	Electrical Conductivity of the Li_2SO_4 - $CaSO_4$ and Li_2SO_4 - $MgSO_4$ Systems. M. A. K. L. Dissanayake and M. A. Careem, **Solid State Ionics 28 (1988) 1093 .** ISSN: 0167-2738	SCI
6.	Ionic Conductivity of Cuprous Sulphate. M. A. K. L. Dissanayake and H. M. N. Bandara, **Electrochemica Acta, 33 (1988) 543.** ISSN: 0013-4686	SCI
7.	Discharge Characteristics of Solid State Cells with Magnesium and Copper Electrodes and Thin Film Solid Electrolyte Cuprous Sulphate. M. A. K. L. Dissanayake, J. Karunamuni and H. M. N. Bandara, **J. Power Sources, 24, No.2 (1988) 165.** ISSN: 0378-7753	SCI
8.	Discharge Characteristics of Solid State Cells Incorporating Thin Film of a Cuprous Halide Mixed Phase. M. A. K. L. Dissanayake and J. Karunamuni, **J. Power Sources, 24 No.4 (1988) 349.** ISSN: 0378-7753	SCI
9.	Electrical Conductivity of Li_2WO_4. M. A. K. L. Dissanayake, **Solid State Ionics, 27 (1988) 109.** ISSN: 0167-2738	SCI
10.	A.C. Conductivity of $MnWO_4$. M. A. K. L. Dissanayake, O. A. Ileperuma and P. A. G. Dharmasena, **J. Phys. Chem. Solids, 50 (1989) 359.** ISSN: 0022-3697	SCI

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11.	Phase Equilibria in the System Li_2SO_4 - Li_2WO_4. R. P. Gunawardane, M. A. K. L. Dissanayake and F. P. Glasser, **Br. Ceram. Trans. J. 88 (1989) 45.** ISSN: 0967-9782	
12.	A New Superconducting Phase in the Y-Ba-Cu-O and Bi-Ca-Sr-Cu-O Mixed System. M. A. K. L. Dissanayake, K. Tennakone, O. A. Ilepruma and S. H. S. P. Samarappuli, **Mod. Phys. Lett. B3 (1989) 447.** ISSN: 0217-9849	SCI
13.	Solid State Cells with Mixed Polycrystalline CuCl : CuCNS Electrolyte and Mg/Cu Electrodes. M. A. K. L. Dissanayake, **Solid State Ionics 34 (1989) 257.** ISSN: 0167-2738	SCI
14.	Effect of Ni substitution on T_c in the (Bi,Pb)-Sr-Ca-CuO System. M. A. K. L. Dissanayake, S. H. S. P. Samarappuli, K. Tennakone, O. A. Ileperuma and N.D. Karunasinghe, **Mat. Res. Bull. 25 (1990) 1487.** ISSN: 0025-5408	SCI
15.	Superconducting Properties of Phosphorus Added (Bi,Pb)-Sr-Ca-Cu-O System. M. A. K. L. Dissanayake, S. H. S. P. Samarappuli, K. Tennakone, O. A. Ileperuma and N.D. Karunasinghe, **Materials Letters 10 (1990) 133.** ISSN: 0167-577X	SCI
16.	Electrical Conductivity of the Li_2SO_4 - Li_2WO_4 System. M. A. K. L. Dissanayake, M. A. Careem, R. P. Gunawardane, P. W. S. K. Bandaranayake and C. N. Wijayasekara, **Solid State Ionics 40/41 (1990) 23.** ISSN: 0167-2738	SCI
17.	On the Ionic Conductivity and Phase Transitions in the Li_2SO_4-Li_2WO_4 System and their relationship to Ion Transport Mechanism. Lunden and M. A. K. L. Dissanayake, **J. Solid State Chemistry, 90 (1991) 179.** ISSN: 0022-4596	SCI
18.	Photodecomposition of Water using Fe(II) / Fe(III) Phosphates as an Intermediate Redox Couple. K. Tennakone, W. D. W. Jayatilake, U. S. Ketipearachchi, W. C. B. Kiridena, M. A. K. L. Dissanayake and O. A. Ileperuma, **J. Photochemistry and Photobiology, A. Chem. 58 (1991) 323.** ISSN: 1010-6030	SCI
19.	Photolysis of p-type CuCNS Dispersions in Aqueous Medium. K. Tennakone, W. D. W. Jayatilake, W. C. B. Kiridena, U. S. Ketipearachchi, M. A. K. L. Dissanayake, J. M. S. Bandara and O. A. Ileperuma , **J. Photochemistry and Photobiology, A. Chem. 60 (1991) 229.** ISSN: 1010-6030	SCI
20.	Structure and Conductivity of a Li_2SiO_4 - Li_2SO_4 Solid Solution Phase. M. A. K. L. Dissanayake and A. R. West, **J. Materials Chemistry, 1 (6) (1991) 1023-1025**. ISSN: 0959-9428	SCI

No.	Paper	J Type
21.	Ionic Conductivity of Solid Solutions of α-Li_2SO_4 with Li_2WO_4 : Strong Evidence for the Paddle Wheel Mechanism of Ion Transport . M. A. K. L. Dissanayake, M. A. Careem, P. W. S. K. Bandaranayake and C. N. Wijayasekera, **Solid State Ionics 48 (1991) 277.** ISSN: 0167-2738	SCI
22.	Paddle Wheel Versus Percolation Mechanism for Cation Transport in Some Sulphate Phases. N. H. Anderson, P. W. S. K. Bandaranayake, M. A. Careem, M. A. K. L. Dissanayake, A. Lunden, B.-E. Mellander, L. Nilson, J. O. Thomas and C. N. Wijayasekera, **Solid State Ionics, 57 (1992) 203.** ISSN: 0167-2738	SCI
23.	Zero Resistivity Transition at 120 K in the (Bi,Pb)-Sr-Ca-Cu-O System. M. A. K. L. Dissanayake, S. H. S. P. Samarappuli, M. J. S. J. Sooriyajeewan, N. D. Karunasinghe and B. G. S. Samarawickrama, **Materials Letters 12 (1992) 403.** ISSN: 0167-577X	SCI
24.	Lithium Ion Conducting $Li_{4-2x}Ge_{1-x}S_xO_4$ Solid Electrolytes. M. A. K. L. Dissanayake, R. P. Gunawardane, A. R. West, G. K. R. Senadeera, P. W. S. K. Banaranayake and M. A. Careem, **Solid State Ionics, 62 (1993) 217.** ISSN: 0167-2738	SCI
25.	Crystal Structure Refinement of Li_4TiO_4 Containing Tetrahedrally Co-ordinated Ti4+ and Tetragonal Packed Oxide Ions. R. P. Gunawardane, J. G. Fletcher, M. A. K. L. Dissanayake, R. A. Howe and A. R. West, **J. Solid State Chemistry112(1994)70.**	SCI
26.	New Li^+ ion Conductors, $Li_{4-2x}Ti_{1-x}S_xO_4$, Based on the Li_4TiO_4 Structure M. A. K. L. Dissanayake, H. H. Sumathipala and A. R. West, **J.Mater.Chem.4(7)(1994)1075.** ISSN: 0959-9428	SCI
27.	Synthesis and Properties of a new β-polymorph of Li_3CrO_4. M. A. K. L. Dissanayake, S. Garcia-Martin, R. Saez-Puche, H. H. Sumathipala and A. R. West. **J. Mater. Chem.4(1994)1307.** ISSN: 0959-9428	SCI
28.	New Solid Electrolytes and Mixed Conductors: $Li_{3+x}Cr_{1-x}M_xO_4$: M = Ge, Ti. M. A. K. L. Dissanayake, R.P. Gunawardane, H. H. Sumathipala and A. R. West, **Solid State Ionics76(1995)215.** ISSN: 0167-2738	SCI
29.	Ionic Conductivity of Glasses in the System Li_2O-P_2O_5-TeO_2. G. D. L. K. Jayasinghe, P. W. S. K. Bandaranayake, M. A. K. L. Dissanayake and R. P. Gunawardane, **Solid State Ionics 78(1995)199.** ISSN: 0167-2738	SCI
30.	Novel Li^+ ion Conductors and Mixed Conductors, G-$Li_{3+x}Si_xCr_{1-x}O_4$: $0.3 < x < 0.7$. H. H. Sumathipala, M. A. K. L. Dissanayake and A. R. West, **J. Electrochem. Soc. 142(7)(1995)2160.** ISSN: 0013-4651	?

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31.	Infrared Spectroscopy Study of the Phases and Phase Transitions in PEO and the Polymer Electrolyte $(PEO)_9$-$LiCF_3SO_3$. M. A. K. L. Dissanayake and Roger Frech, **Macromolecules 28(1995)5312** ISSN: 0024-9297	SCI
32.	Lithium insertion into Li_3CrO_4 and related LISICON materials. S. Garcia-Martin, A.D. Robertson, M.A.K.L. Dissanayake and A.R. West, **Solid State Ionics 76(1995)309.** ISSN: 0167-2738	SCI
33.	Novel LISICON mixed conductors, $Li_{4-2x}Co_xGeO_4$. H.H. Sumathipala, M.A.K.L. Dissanayake and A.R. West, **Solid State Ionics 86-88(1996)719.** ISSN: 0167-2738	SCI
34.	Electronic to Ionic conductivity in glasses in the Na2O-V2O5-TeO2 system. G.D.L.K. Jayasinghe, M.A.K.L. Dissanayake, M.A. Careem and J.L. Souquet, **Solid State Ionics 93(1997)291.** ISSN: 0167-2738	SCI
35.	Ionic conductivity of plasticized (PEO)-$LiCF_3SO_3$ electrolyte. L.R.A.K. Bandara, M.A.K.L. Dissanayake and B.E. Mellander, **Electrochemica Acta (10,11)(1998)1447.** ISSN: 0013-4686	SCI
36.	Electronic to Ionic conductivity in glasses in the Li2O-V2O5-TeO2 system. G.D.L.K. Jayasinghe, M.A.K.L. Dissanayake, P.W.S.K. Bandaranayake, J.L. Souquet and D. Foscallo, **Solid State Ionics 121(1999)19.** ISSN: 0167-2738	SCI
37.	Copper-ion conducting solid polymer electrolytes based on polyacrylonitrile(PAN). Kumudu Perera, M.A.K.L. Dissanayake and P.W.S.K. Bandaranayake, **Electrochemica Acta 45(2000)1369.** ISSN: 0013-4686	SCI
38.	A novel gel polymer electrolyte based on polyacrylonitrile (PAN) and its application in a solar cell. M.A.K.L. Dissanayake, L.R.A.K. Bandara, R.S.P. Bokalawela, P.A.R.D. Jayathilaka, O.A. Ileperuma and S. Somasunadaram, **Materials Research Bulletin, 37(2002)867**. ISSN: 0025-5408	SCI
39.	Effect of nano-porous Al_2O_3 on thermal, dielectric and transport properties of the $(PEO)_9$LiTFSI polymer electrolyte system. P.A.R.D. Jayathilaka, M.A.K.L. Dissanayake, I. Albinson and B.-E. Mellander, **Electrochimica Acta,** 47(2002)3257. ISSN: 0013-4686	SCI
40.	Dye-sensitised photoelectrochemical solar cells with polyacrylonitrile based solid polymer electrolytes. O.A. Ilepruma, M.A.K.L. Dissanayake and S. Somasunadaram, **Electrochimica Acta 47(2002)2801.** ISSN: 0013-4686	SCI

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41.	Dielectric relaxation, ionic conductivity and thermal studies of the gel polymer electrolyte system PAN/EC/PC/LiTFSI. P.A.R.D. Jayathilaka, M.A.K.L. Dissanayake, I. Albinson and B.-E. Mellander, **Solid State Ionics 156(2003)179.** ISSN: 0167-2738	SCI
42.	Effect of concentration and grain size of alumina filler on the ionic conductivity enhancement of the (PEO)9LiCF3SO3:Al2O3 composite polymer electrolyte; M.A.K.L. Dissanayake, P.A.R.D. Jayathilaka, R.S.P. Bokalawela, I. Albinson and B.-E. Mellander, **Journal of Power Sources 119-121(2003)409**. ISSN: 0378-7753	SCI
43.	Ionic conductivity of a gel polymer electrolyte based on Mg(ClO4)2 and polyacrylonitrile (PAN). Kumudu Perera, M.A.K.L. Dissanayake, P.W.S.K. Bandaranayake, **Material Research Bulletin, 39(11) (2004)1745.** ISSN: 0025-5408 *Selected as one of the **TOP 25 Hottest Articles** from ScienceDirect database out of more than 2000 articles published in 2004.*	SCI
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45.	Photoelectrochemical solar cells with polyacrylonitrile-based and polyethylene oxide-based polymer electrolytes. O.A. Ilepruma, M.A.K.L. Dissanayake, S. Somasundaram and L.R.A.K. Bandara, **Solar Energy Materials and Solar Cells, 84(2004)117.** ISSN: 0927-0248 *Selected as one of the **TOP 25 Hottest Articles** from ScienceDirect database out of more than 2000 articles published in 2004.*	SCI
46.	Ionic conductivity of PEO_9:$Cu(CF_3SO_3)_2$: Al_2O_3 nano-composite solid polymer electrolyte. M.A.K.L. Dissanayake, P.A.R.D. Jayathilaka and R.S.P. Bokalawela, **Electrochimica Acta, 50(28)(2005)5602.** ISSN: 0013-4686	SCI
47.	Thermal and electrical properties of solid polymer electrolyte $PEO_9Mg(ClO_4$ incorporating nano-porous Al_2O_3 filler, M.A.K.L. Dissanayake, L.R.A.K. Bandara, L.H. Karaliyadda, P.A.R.D. Jayathilaka and R.S.P. Bokalawela, **Solid State Ionics** 177(3-4)(2006)343. ISSN: 0167-2738	SCI
48.	Ionic conductivity of poly(ethyleneoxide) (PEO)-Montmorillonite (MMT) Nanocomposites Prepared by Intercalation from Aqueous Medium. G.H. Manoratne, R.M.G. Rajapakse, M.A.K.L. Dissanayake **Int. J. Electrochemical Sci.** 1 (20006) 32-46. ISSN 1452-3981	SCI Exp.
49.	Combined effect of Al_2O_3 nano-fillers and EC plasticizer on ionic conductivity enhancement in the solid polymer electrolyte $(PEO)_9LiTf$ H.M.J.C. Pitawala, M.A.K.L. Dissanayake and V.A. Seneviratne, **Solid State Ionics,** 78(2007)885. ISSN: 0167-2738	SCI

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50	Application of Polyacrylonitrile-based polymer electrolytes in rechargeable lithium batteries;, K.S. Perera, M.A.K.L. Dissanayake, S. Skaarup, K. West, **J. Solid State Electrochemistry,** DOI 10. 1007/s10008-007-0479-x; Published On-line, 05 December 2007. ISSN: 1432-8488	SCI Exp.
51.	Polyethyleneoxide (PEO)-based, anion conducting solid polymer electrolyte for PEC solar cells, T.M.W.J. Bandara, M.A.K.L. Dissanayake, O.A. Ileperuma, K. Varaprathan, K. Vignarooban and B.-E. Mellander **J. Solid State Electrochem**. VOL. 12 ,913-917(2008) ISSN: 1432-8488	SCI Exp.
52.	Effect of plasticizers (EC or PC) on the ionic conductivity and thermal properties of $(PEO)_9LiTf:Al_2O_3$ nanocomposite polymer electrolyte system. H.M.J.C. Pitawala, M.A.K.L. Dissanayake, V.A. Seneviratne, B.-E. Mellander and I. Albinson Journal: **J Solid State Electrochemistry** Vol.12,783-789 (2008) ISSN: 1432-8488	SCI Exp.
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54.	Effect of thermal history and characterization of plasticized, composite polymer electrolyte based on PEO and tetrapropylammonium iodide salt (Pr4N+I-), T.M.W.J. Bandara, B.E. Mellander, I. Albinsson, M.A.K.L. Dissanayake **Solid State Ionics** 180: 362-367 (2009) ISSN: 0167-2738	SCI
55	Dye sensitized solar cells with poly(acrylonitrile) based plasticized electrolyte containing MgI_2, T. M. W. J. Bandara, M. A. K. L. Dissanayake, I. Albinsson, B.-E. Mellander, **Electrochimica Acta**, Volume 55, 6, 15 (2010) 2044-2047	SCI

No.	Paper	J Type
56.	Dye sensitized, nanoporous TiO2 solar cell with poly(acrylonitrile): MgI2 plasticized electrolyte , T.M.W.J. Bandara, M.A.K.L. Dissanayake, I. Albinsson and B.E. Mellander. **Journal of Power Sources** 195 : 3730-3734 (2010). ISSN: 0378-7753	SCI
57.	Thermal and dielectric properties of PEO/EC/Pr4N+I_ polymer electrolytes for possible applications in photo-electrochemical solar cells, T.M.W.J. Bandara, B.E. Mellander, I. Albinsson, M.A.K.L. Dissanayake and H.M.J.C. Pitawala **J.Solid State Electrochem** 13: 1227-1232 (2009) ISSN: 1432-8488	SCI Exp.
58.	A polymer electrolyte containing ionic liquid for possible applications in photoelectrochemical solar cells, T. M. W. J. Bandara, P. Ekanayake, M. A. K. L. Dissanayake, I. Albinsson, B.-E. Mellander, **J. State Electrochemistry**, 14 (2010) 1221–1226	SCI Exp.
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61.	Efficiency enhancement in dye sensitized solar cells using gel polymer electrolytes based on a tetrahexylammonium iodide and MgI2 binary iodide system T. M. W. J. Bandara, **M. A. K. L. Dissanayake,** W. J. M. J. S. R. Jayasundara, I. Albinssone and B.-E. Mellander **J. Phys. Chem. Chem. Phys**. 2012, 14, 8620–8627.	SCI
62.	Effects of $CdCl_2$ heat treatment on the morphological and chemical properties of CdTe/CdS thin films solar cells Khaled M. AbuEl-Rub, S.-R. Hahn, S. Tari, **M.A.K.L. Dissanayake** **Applied Surface Science,** Volume 258, Issue 16, 2012, Pages 6142–6147.	SCI
63.	Ionic conductivity enhancement in the solid polymer electrolyte PEO_9LiTf by nanosilica filler from rice husk ash **M. A. K. L. Dissanayake** , W. N. S. Rupasinghe , J. M. N. I. Jayasundara, P. Ekanayake, T. M. W. J. Bandara , S. N. Thalawala and V. A. Seneviratne **J Solid State Electrochem, 2012** DOI 10.1007/s10008-012-1737-0	SCI Exp
64.	Efficiency enhancement by mixed cation effect in dye-sensitized solar cells with PAN based gel polymer electrolyte **M.A.K.L. Dissanayake**, C.A. Thotawatthage , G.K.R. Senadeera, T.M.W.J. Bandara, W.J.M.J.S.R. Jayasundera and B.-E. Mellander **J Photochemistry & Photobiology: A Chemistry,** 2012, **246**, 29– 35.	SCI

65.	Efficiency enhancement in dye sensitized solar cells based on PAN gel electrolyte with $Pr_4NI + MgI_2$ binary iodide salt mixture. **M. A. K. L. Dissanayake**, C. A. Thotawatthage, G. K. R. Senadeera, T. M. W. J. Bandara, W. J. M. J. S. R. Jayasundara, B.-E. Mellander, **J Appl Electrochem (2013) 43:891–901**	SCI Exp
66.	Effect of cation size on the performance of dye sensitized nanocrystalline TiO2 solar cells based on quasi-solid state PAN electrolytes containing quaternary ammonium iodides T.M.W.J. Bandara, W.J.M.J.S.R. Jayasundara, **M.A.K.L. Dissanayake,** M. Furlani, I. Albinsson, B.-E.Mellander, **Electrochimica Acta, 109 (2013) 609– 616.**	SCI
67.	Conductivity and Thermal Properties of PAN Based Polymer Electrolytes for Possible Application in Photo Electrochemical Solar Cells W.J.M.J.S.R. Jayasundara, T.M.W.J.Bandara, P.S.L. Fernando, H.D.N.S.Fernado, **M.A.K.L. Dissanayake**, L.R.A.K. Bandara, B.-E. Mellander, **Journal of Electrical Engineering (2013)**	
68.	Ionic conductivity enhancement in the solid polymer electrolyte PEO_9LiTf by nanosilica filler from rice husk ash **M. A. K. L. Dissanayake**, W. N. S. Rupasinghe, J. M. N. I. Jayasundara, P. Ekanayake, T. M. W. J. Bandara, S. N. Thalawala, V. A. Seneviratne**, J Solid State Electrochem (2013) 17:1775–1783**	SCI Exp
69.	Conductivity behaviour in novel quasi-solid-state electrolyte based on polyacrylonitrile and tetrahexylammonium iodide intended for dye sensitized solar cells T.M.W.J. Bandara, T. Svensson, **M.A.K.L. Dissanayake**, M. Furlani, W.J.M.J.S.R. Jayasundara, P.S.L. Fernando, I. Albinsson and B.E. Mellander, **J.Natn. Sci. Foundation Sri Lanka (2013) 41 (3): 175-184**	SCI Exp
70.	Dye-sensitized solar cells based on electrospun polyacrylonitrile (PAN) nanofibre membrane gel electrolyte M.A.K.L. Dissanayakea,d,e,∗, H.K.D.W.M.N.R. Divarathnea,e, C.A. Thotawatthagea, C.B. Dissanayakea, G.K.R. Senadeeraa,b, B.M.R. Bandarac **Electrochimica Acta 130 (2014) 76–81**	SCI
71.	Efficiency enhancement by mixed cation effect in dye-sensitized solar cells with a PVdF based gel polymer electrolyte A.K. Arof, M.F. Aziz, M.M. Noor, M.A. Careem, L.R.A.K. Bandara, C.A. Thotawatthage, W.N.S. Rupasinghe, M.A.K.L. Dissanayake, **Int J Hydrogen Energy, 3 9 (2 0 1 4) 2 9 2 9 -2 9 3 5**	SCI

73.	Quasi solid state polymer electrolyte with binary iodide salts for photo-electrochemical solar cells; T.M.W.J. Bandara, W.J.M.J.S.R. Jayasundara , **M.A.K.L. Dissanayake**, H.D.N.S. Fernando, M. Furlani, I. Albinsson, B.-E. Mellander, **Int J Hydrogen Energy 3 9 (2 0 1 4) 2 9 9 7 -3 0 0 4**	SCI
74.	Efficiency enhancement of dye-sensitized solar cells with PAN:CsI:LiI quasi-solid state (gel) electrolytes T. M. W. J. Bandara ,W. J. M. J. S. R. Jayasundara ,H. D. N. S. Fernado , M. A. K. L. Dissanayake , L. A. A. De Silva, P. S. L. Fernando • M. Furlani • B.-E. Mellander **J Appl Electrochem (2014) 44:917–926**	SCI Exp
75.	Higher Efficiency for Quasi-Solid State Dye Sensitized Solar Cells Under Low Light Irradiance Ajith DeSilva, TMWJ Bandara, HDNS Fernado, PSL Fernando, MAKL Dissanayake, WJMJSR Jayasundara, M Furlani, B-E Mellander Publication date: 2014/3/4 Journal name: **Bulletin of the American Physical Society**	
76.	Effect of surface roughness of the substrate on the performance of PolycrystallineCdS/CdTe solar cells K. Balashangar, M.Thanihaichelvan,P. Ravirajan, G. D. K. Mahanama, M. A. K. L. Dissanayake, E. Colegrove, R.G.Dhere and S. Sivananthan **J. of Op[toelectronics and Nano Electronics, Accepted 2014**	
77.	Development of Cathode Materials for Lithium Ion Rechargeable Batteries Based on the System Li(Ni1/3Mn1/3Co(1/3-x)Mx)O2, (M = Mg, Fe, Al and x = 0 to 0.33) Pushpaka Bandara Samarasingha, Athula Wijaysainghe, M.A.K.L. Dissanayake **Solid State Ionics, Accepted 2014**	

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1. Efficiency enhancement by mixed cation effect in dye sensitized solar cells based on polymer electrolytes.
   M.A.K. Lakshman Dissanayake, Invited presentation-Solar Asia 2013 international Research Conference, University of Malaya, KL, Malaysia 22-24 August 2013.

2. Efficiency dependence on dipping time and pH value of natural dye of nanocrystalline, nanoporous TiO_2 photo sensitizer
   P.W. Abeygunawardhana**, C.A. Thotawatthage**, G.K.R. Senadeera and M.A.K.L. Dissanayake, Solar Asia 2013 international Research Conference, University of Malaya, KL, Malaysia 22-24 August 2013.

3. Novel quasi solid state electrochromic smart windows based on TiO_2 And SnO_2 electrodes with PMMA gel electrolyte.
   H.N.M.Sarangika, G.K.R. Senadeera, C. A. Thotawattage and M.A.K.L.Dissanayake, Solar Asia 2013 international Research Conference, University of Malaya, KL, Malaysia 22-24 August 2013.

4. Efficiency Enhancement in Dye Sensitized Solar Cells based on blended polymer electolyte PMMA:PEG with $Pr_4N^+I^-$ as the iodide salts.
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5. Efficiency Enhancement of Dye-Sensitized Solar Cells by TiO_2 Nano Fillers in Polymer Electrolyte.
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16. Use of surface plasmon resonance of gold nanoparticles in the efficiency enhancement of dye sensitized solar cells with TiO_2

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2. Performance of TiO_2 as Cathode Material In Rechargeable Mg Batteries with Polyethylene Oxide based Gel Electrolyte
E.M.T. Ekanayake, V.A. Seneviratne, M.A,K,L. Dissanayake, et al

3. Optimization Of Iodide Ion Conductivity In Electrolytes For Dye Sensitized Solar Cells
M.A.K. Lakshman Dissanayake (Invited)

4. Electrical And FTIR Study Of Fumed Silica Based Gel Electrolytes; (Tetraglyme)Nkiand (Ethylene $Glycol)_n$KI

K.V.L. Amarasinghe, V. A. Senaviratne, L. R. A. K. Bandara, M. A. K. L. Dissanayake

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44.	Nanocomposite polymer electrolytes with nanosilica from rice husk ash. J.M.N.I. Jayasundara, W.N.S. Rupasinghe, S.N. Thalawala, P. Ekanayake, V.A. Seneviratne and M.A.K.L. Dissanayake Proc. PURSE-2010: Vol. 15: 446-447	
45.	Effect of carbon black for ionic conductivity of polymer electrolytes. E.A.D.M. Athukorala, M.A.K.L. Dissanayake and V.A. Seneviratne **Proc. PURSE-2010: Vol 15: 511-513**	
46.	Ionic conductivity study on natural rutile based composite polymer electrolyte K.V.L. Amarasinghe, M.A.K.L. Dissanayake and V.A. Seneviratne **Proc. PURSE-2010; Vol15: 449-451**	

47.	Charge carrier density, mobility and diffucion coefficient of ionic liquids by modelling space charge relaxation T.M.W. Bandara, M.A.K.L. Dissanayake and B.E. Mellander **Proc. PURSE -2010; Vol 15: 455-457**	
48.	Effect of Mixed Cations on the Efficiency Enhancement of Dye Sensitized Solar Cells Based on Gel Polymer Electrolytes Containing CsI and LiI *Binary Iodide System* **Proc. First International Conference on Advanced Materials, Science and Engineering (ICAMSE '12) July 01-04, 2012, Colombo, Sri Lanka** T.M.W.J. Bandara , W.J.M.J.S.R. Jayasundara, M.A.K.L. Dissanayake, P.S.L. Fernando, H.D.N.S.Fernado, B.-E. Mellander	
49.	Quasi Solid polymer Electrolytes For Dye Sensitized Solar Cells. **M.A.K. Lakshman Dissanayake (*Invited*)** **Proc. 13th Asian Conf on Solid State Ionics (ACSSI-2012),17 - 20 July 2012, Sendai, Japan.**	
50.	Quasi Solid State Polymer Electrolyte with *Binary* iodides for Photo-electrochemical Solar Cells T. M. W. J. Bandara , M. Furlani, W. J. M. J. S. R. Jayasundara, M. A. K. L. Dissanayake, and B. E. Mellander, , **ISPE-13 XIII International Symposium on Polymer Electrolytes 26 - 31 August 2012 Selfoss, Iceland**	
51.	Efficiency enhancement by mixed cation effect in dye-sensitized solar cells with a PVdF based gel polymer electrolyte M. Wan, A.K. Arof, L.R.A.K. Bandara, C.A. Thotawatthage , W.N.S. Rupasinghe, **M.A.K.L. Dissanayake** **13th International Symposium on Polymer Electrolytes (ISPE-XIII) 26 - 31 August 2012, Selfoss, Iceland.**	

3.

Text Books and Monographs and Chapters in Books

Text Books

I have authored and published seven text books in Physics in Sinhalese language for G.C.E. Advanced Level students and teachers. These books were written during the 1979-2000 period. This series of books are very popular and widely used by many students and teachers.

- The main idea of writing this series of text books is to disseminate "**clear physical concepts in Physics**" to students and teachers, as "misconceptions" at this introductory stage would lead to confusion and wrong conclusions on important Physical concepts, which can be detrimental to their studies later on.
- These books are o**riginal** and written by me (except the book on Electronics, which was co-authored with Dr. S.A. Leelananda).
- Books have been written in the Sri Lankan context, with Sri Lankan student in mind, and quoting examples, where ever possible from **local settings.**
- Books have been written, in simple, but **grammatically correct** Sinhalese language.

No.	**Text Book**	Year of publication
1.	"**Yanthra Vidyawa**" (Mechanics) for G.C.E. Advanced Level students. Revised edition published in 2010 Lakshman Dissanayake	2010
2.	"**Thapaya**" (Heat) for G.C.E. Advanced Level students. Lakshman Dissanayake Revised edition published in 2010	2010
3.	"**Dhara Vidyuthaya**" (Current Electricity) for G.C.E. Advanced Level students. Revised edition published in 2008 Lakshman Dissanayake	2008
4.	"**Padarthaye Gune**" (Properties of Matter for G.C.E. Advanced Level students. Revised edition published in 2004 Lakshman Dissanayake	2008
5.	"**Padartha ha Vikirana**" (Matter and Radiation) for G.C.E. Advanced Level students. Revised edition published in 2004 Lakshman Dissanayake	2009
6.	"**Bala Kshesthra**" (Fields) for G.C.E. Advanced Level students (2008) Lakshman Dissanayake	2010
7.	"**Electronica Vidyawa**" (Electronics) for G.C.E. Advanced Level students. Revised edition published in 2009 Lakshman Dissanayake and Sudasnghe Leelananda	2009
8.	"**Introduction to Nanotechnology and other advances in Science**" for G.C.E. Advanced Level and General Reading	2011

4. Patents : Antimicrobial, portable, polymer nanofibre water filter:
Patent pending, Sri Lanka Patent Office, Colombo 2014

5.

Contributions to National Developments

5.1 National Committees

Membership in National Committees

	Office	Period
1.	Member, NARESA Working Committee on Physical and Engineering Sciences	1991-1994
2.	Member, UGC Standing Committee on Sciences	1995-2002
3.	Member/Convener, Presidential Task Force on Integrated R&D in Science and Technology for the Government of Sri Lanka	1997-2000
4.	Member, Board of Management, Postgraduate Institute of Science (PGIS)	1998-2008
5.	Chairman, Board of Study in Science Education of the PGIS	1999-2008
6.	Director, Postgraduate Institute of Science (PGIS), University of Peradeniya	2003-2006 2006-2008
7.	Member, Board of Management, NSF	2004-2008
8.	Member, Advisory Board to the Research Division, NSF	2005-2008
9.	Member, National Task on Nanotechnology appointed by the NSF	2006-2007
10.	Member and Chairman, NSF Research Committee on Fundamental Research	2006-2008
11.	Member, Board of Management, PGIA, University of Peradeniya	2007-2008
12.	Member, National Committee on Energy, NSF	2008-2009
13.	Member, National Committee on Nanotechnology, NSF	2008-2009
14.	Member, National Committee on Quality Assurance for Research	2008-2010
15.	Member, UGC Subject Review Committee, Physics	2009-2010
16.	Member, Ministerial Task force to develop a Five Year National Strategic Plan on Science and Technology for Sri Lanka	2010
17.	Member, Board of Management of the Institute of Fundamental Studies	2010-2012

5.2

Membership in Professional Bodies

	Office	Period
1.	Fellow and Founder Member, Institute of Physics Sri Lanka	1981-2011
2.	Member, Sri Lanka Association for the Advancement of Science (SLAAS)	1987-2011
3.	Member of the Executive Committee, Asian Society for Solid State Ionics	1988-2011
4.	President, Section E1 (Physical Sciences), Sri Lanka Assn. for Advancement of Science (SLAAS)	1990
5.	Fellow, National Academy of Science, Sri Lanka	1995-2011
6.	Chairman, Asian Physics Education Network (ASPEN)	2002-2006
7.	Member, American Association of Physics Teachers (AAPT)	2002-2006

8.	Member, American Association for the Advancement of Science (AAAS)	2003-2004
9.	Associate Member, Internationl Union of Pure and Applied Physics (IUPAP) of UNESCO	2003-2006

6.

Research Grants

6.1 Research Grants:

I am the Grantee/Co-Grantee of the following research grants, currently administered by the Postgraduate Institute of Science (GIS), University of Peradeniya.

	Account Code	Grant	Grantees	Period/Remarks
1.	6002	EU Grant	M.A.K.L. Dissanayake	1996-2011*
2.	6007	Solid State Physics Conference Grant	M.A.K.L. Dissanayake & M.A. Careem	1996-2011*
3.	6000	IPPS (Uppsala) Grant	M.A.K.L. Dissanayake M.A. Careem	1996-2011*
4.	6037	NSF Grant	M.A.K.L. Dissanayake & M.A. Careem	2001-2006
5.	6068	NSF Grant	M.A.K.L. Dissanayake R.M.G. Rajapakse.	2005-2008
6.	30729	Science Education Workshop Grant	M.A.K.L. Dissanayake	1998-2008
7.	20400	ASPEN Physics Education WS Grant	M.A.K.L. Dissanayake	2002-2011
8.	30703	International Statistical Conference Grant	M.A.K.L. Dissanayake Ms. P. Wijekoon	2004-2011
9.	30726	ACSSI-10 Conference Grant	M.A.K.L. Dissanayake M.A. Careem	2006-2011

* The administration of these three research grants were transferred from the University to the PGIS in 1996.

A letter certifying these grants issued by the Director of the Postgraduate Institute of Science (PGIS) is attached.

Whatever the additional supporting material available have also been submitted.

Additional Grants, not administered by the PGIS or not included in the above list.

		Grant	Grantees	Period
10.		NARESA RG/91/C/01	M.A.K.L. Dissanayake H.M.N. Bandara	1990-1993
11.		Peradeniya University	M.A.K.L. Dissanayake	1995 (one

		Research Grant		year)
12.		PGIS Research Grant	M.A.K.L. Dissanayake	2003 (10 months)
13.		Peradeniya University Research Grant	M.A.K.L. Dissanayake	2004-2005
14.		NSF Grant	V.A. Seneviratne M.A.K.L. Dissanayake	2005-2007
15.		NRC Grant	M.A.K.L. Dissanayake V.A. Seneviratne	2010-2012

6.2 **Travel Grants:**

	Grating agency	**Activity & Year**
1.	IPPS, Uppsala, Sweden	SSI conference in Australia - 2001
2.	KOICA, S. Korea	Training Programme in S&T Policy, 2003
3.	Swedsih Reseach Council	Int. Sym. on Polymer Electrolytes, Poland 2004
4.	IPPS, Uppsala, Sweden	China Nano – 2005 conference, China, 2005
5.	ICTP,Trieste, Italy	Research visit to ICTP; August, 2005
6.	Indo-Sri Lanka Foundation	Int. Conf. on Physics Education, Delhi, August, 2005
7.	American Physical Society	World Conf. on Physics and Sust. Development, S. Africa, Oct. 2005
8.	UNESCO	Int. Conf. on Physics Education, Tokyo, 2006
9.	NSF	Asia Nano Conference in Busan, Korea, 2006
10.	ADPC, Thailand	Disaster Management Workshop, Bangkok, 2006
11.	IPPS, Uppsala, Sweden	ICID Conference in Chennai, Dec. 2006
12.	ICTP, Italy	Research Visit to ICTP, Trieste, Italy, 2007
13.	UNESCO	ASPEN General Assembly, Manila, 2007
14.	IPPS, Uppsala, Sweden	IPPS Reference Group Meeting, 2007
15.	IPPS, Uppsala, Sweden	SmartMat-2008 conference in Chiang Mai, April, 2008
16.	IPPS, Uppsala, Sweden	ACSSI-11 conference, Coimbatore, India, June 2008
17.	IPPS, Uppsala, Sweden	ICPE Int Conf on Physics Education, Bangkok, Oct. 2009
18.	IPPS, Uppsala, Sweden	IWPSD conference in New Delhi, Dec. 2009
19.	IPPS, Uppsala, Sweden	NOPT 2010 conf. in Singapore, Feb. 2010
20.	IPPS, Uppsala, Sweden	ACSSIS -12 conference in Wuhan, China, May 2010
21.	Swedish Research Council	Research Visit to Chalmers University, Sweden, June 2010.
22.	Swedish Research Council	Research Visit to Chalmers University,

		Sweden, June 2011
23.	ACSSIs	ACSSIS -13 conference in Sendai, Japan, April 2012
24.	Swedish Research Council	Research Visit to Chalmers University, Sweden, November 2012.

7.

Dissemination of Knowledge

7.1 Editing of Journals: Listed below

7.1 A: As Editor-in-Chief in refereed journals

No.	**Journal** **Ceylon Journal of Science- Physical Sciences** *An international journal published by the University of Peradeniya, Sri Lanka for publication of refereed research papers in Physical Sciences*. **ISSN 1391-1465**	Points
1.	**Ceylon Journal of Science- Physical Sciences** Volume 1, No.1 (1994) Editor-in-Chief: M.A.K.L. Dissanayake	
2.	**Ceylon Journal of Science- Physical Sciences** Volume 2, No.1 (1995) Editor-in-Chief: M.A.K.L. Dissanayake	
3.	**Ceylon Journal of Science- Physical Sciences** Volume 3, No.1 (1996) Editor-in-Chief: M.A.K.L. Dissanayake	
4.	**Ceylon Journal of Science- Physical Sciences** Volume 4, No.1 (1997) Editor-in-Chief: M.A.K.L. Dissanayake	
5.	**Ceylon Journal of Science- Physical Sciences** Volume 5, No.1 (1998) Editor-in-Chief: M.A.K.L. Dissanayake	
6.	**Ceylon Journal of Science- Physical Sciences** Volume 6, No.1 (1999) Editor-in-Chief: M.A.K.L. Dissanayake	
7.	**Ceylon Journal of Science- Physical Sciences** Volume 7, No.1 (2000) Editor-in-Chief: M.A.K.L. Dissanayake	
8.	**Proc. Peradeniya University research Sessions- 2002 (PURSE-2002)** Refereed abstracts book M.A.K.L. Dissanayake, Chairman of the Editorial Board	

7.1 B: As a member of the Editorial Board in refereed journals

No.	**Journal**	
1.	**Journal of the National Science Foundation (NSF) of Sri Lanka** L. Dissanayake: Member, Editorial Board Vol. 27, No.1 (March,1999)	
2.	**Journal of the National Science Foundation (NSF) of Sri Lanka** L. Dissanayake: Member, Editorial Board Vol. 27, No.2 (June, 1999)	
3.	**Journal of the National Science Foundation (NSF) of Sri Lanka** L. Dissanayake: Member, Editorial Board Vol. 27, No.3 (Sept., 1999)	
4.	**Journal of the National Science Foundation (NSF) of Sri Lanka** L. Dissanayake: Member, Editorial Board Vol. 27, No.4 (Dec., 1999)	
5.	**Journal of the National Science Foundation (NSF) of Sri Lanka** L. Dissanayake: Member, Editorial Board Vol. 28, No.1 (March, 2000)	
	Asia-Pacific Physics News (ASPAP News); A refereed journal devoted to current research news and papers, Published in Association with UNESCO. ***Sample copy attached.*** M.A.K.L. Dissanayake, Member of the Editorial Board	
6.	**Asia-Pacific Physics News (ASPAP News);** M.A.K.L. Dissanayake, Member of the Editorial Board Vol.3, No.1 (June/July, 1988)	
7.	**Asia-Pacific Physics News (ASPAP News);** M.A.K.L. Dissanayake, Member of the Editorial Board Vol.3, No.2(Dec., 1988)	
8.	**Asia-Pacific Physics News (ASPAP News);** M.A.K.L. Dissanayake, Member of the Editorial Board Vol.3, No.1 (June/July, 1988)	
9.	**Asia-Pacific Physics News (ASPAP News);** M.A.K.L. Dissanayake, Member of the Editorial Board Vol.5, No.1 (June/July, 1990)	
10.	**Asia-Pacific Physics News (ASPAP News);** M.A.K.L. Dissanayake, Member of the Editorial Board Vol.1, No.1 (June, 1991)	
11.	**Asia-Pacific Physics News (ASPAP News);** M.A.K.L. Dissanayake, Member of the Editorial Board Vol.1, No.3 (Dec., 1991)	
12.	**Asia-Pacific Physics News (ASPAP News);** M.A.K.L. Dissanayake, Member of the Editorial Board Vol.2, No.4 (Dec., 1992)	

7.1 C Editing Proceedings of International Research Conferences:
Member of the Editorial Board

No.	Proccedings	
13.	**Proc. 5th Asian Solid State Ionics Conf. (ACSSI-5) Dec., 1996** Published by World Scientific, Singapore. Member of the Editorial Board M.A.K.L. Dissanayake	
14.	**Proc. 10th Asian Solid State Ionics Conf. (ACSSI-10) June, 2006** Published by World Scientific, Singapore. Member of the Editorial Board M.A.K.L. Dissanayake	
15.	**Proc. Conf. on Solid State Physics (Solid State Physics-I), 1987** Institute of Fundamental Studies, Kandy, Sri Lanka. Published by Nova Science Publishers, USA(1990) M.A.K.L. Dissanayake, Member, Editorial Board	
16.	**Proc. Int. Conf. on Solid State Physics (Solid State Physics-II), 1989** Institute of Fundamental Studies, Kandy, Sri Lanka. Published by Nova Science Publishers, USA(1991) M.A.K.L. Dissanayake, Member, Editorial Board	
17.	**Peradeniya University Annual Research Sessionss, 2002**	
18.	**NCAMET (2008), Peradeniya, Sri Lanka**	
19.	**IPPS Felicitation Symposium 2011, Peradeniya, Sri Lanka**	

7.2A. Reviewing articles for Reputed Journals

I have been a reviewer for many research articles for Solid State Ionics and Electrochimica Acta, both are SCI journals. I have also been a reviewer for the Journal of the National Science Foundation, Sri Lanka and Ceylon Journal of Science, University of Peradeniya for many years. Documentary proofs cannot be traced and I give below only few examples:

	Journal	Article/year
1.	J. of the National Science Council of Sri Lanka	Ionic conductivity of……..1989
2.	J. of the National Science Council of Sri Lanka	Tertiary Education in Physical…1998
3.	J. of the National Science Foundation, Sri Lanka	Measurement and Analysis……..1999
4.	Solid State Ionics	PEO-PU/PAN semi-interpenetrating …2003
5.	Journal of National Science Foundation, Sri Lanka	Thickness dependence of device..2009
6.	Journal of National Science Foundation, Sri Lanka	Unusual crystal- lattice…… 2009
7.	Sri Lanka J. of Social Sciences	Reborn curriculum efforts in……2011
8.	Journal of National Science Foundation, Sri Lanka	Layered double hydroxide…….2011

7.2 B: Documented orations, keynote addresses etc:

	Orations	
No.	**Document Oration**	
1.	**Kottegoda Memorial Oration – 2004** "***Ethics in Scientific Research for a Knowledge-Based Society***" By Prof. M.A.K.L. Dissanayake *Organized by the Sri Lanka Assn for the Advt. of Sci. (SLAAS) Ethics Committee, SLAAS Auditorium, Colombo, 30th Nov. 2004, p 1-13.*	

7.2 C: Teaching at Universities

	University	Period
1.	University of Peradeniya, Peradeniya	1971 to 2010 (30 yrs)**
2.	University of Illinois at Chicago, USA	2008-2009 (One year)
3.	University of Jaffna	2011 (4 months, till 31st May)

** Deduct: 4 yrs for Ph.D. training, 5 yrs for sabbatical leave

7.3.

Organization of Scientific meetings (conferences, workshops, symposia etc)

I was a Chairman or a Member of the Organizing Committee of the following conferences/workshops/symposia held at Peradeniya/Kandy:

	Activity	Period	Organizers
1.	First Int. Symposium on Solid State Physics, IFS, Kandy,	20-25 April, 1987	M.A.K.L. Dissanayake **R. Attle**, K. Tennakone
2.	Second Int. Symposium on Solid State Physics, IFS, Kandy	15-20 May 1989	**M.A.K.L. Dissanayake** K. Tennakone O.A. Ileperuma
3.	Third Int. Symposium on Solid State Physics, IFS, Kandy	1991 Proof not available !	M.A.K.L. Dissanayake K. Tennakone O.A. Ileperuma
4.	Fifth Asian Conf. on Solid State Ionics, Kandy	207 December 1996	M.A.K.L. Dissanayake Chairman, Organizing Comm.

The following international and national conferences, workshops and symposia have been organized at Peradeniya through the Postgraduate Institute of Science (PGIS), University of Peradeniya where I have been the chairperson or co-chair person of the organizing committee.

	Activity	Period	Organizers
5.	Training workshop in Electronics for A-Level Physics Teachers	3-5 April 1997	Coordinators: Prof. M.A.K.L. Dissanayake Dr. S.A. Leelananda
6.	International Workshop on Science Education	12-16 January 1999	Chairman, Organizing Committee: Prof. M.A.K.L. Dissanayake
7.	Workshop on Postgraduate Education in Sciences (NSF+PGIS) in Colombo	30th June 2000	Coordinator: Prof. M.A.K.L. Dissanayake
8.	First National Workshop on Computer Based Interactive Physics Teaching	13-15 February 2001	Chairman, Organizing Committee: Prof. M.A.K.L. Dissanayake
9.	UNESCO-ASPEN Regional Workshop on Active Learning in Physics	30 Nov.-5 Dec., 2002	Chairman, Organizing Committee: Prof. M.A.K.L. Dissanayake
10.	International Statistical Conference	26-28 Dec. 2004	Co-chair, Local Organizing Comm. Prof. M.A.K.L. Dissanayake Dr. P. Wijekoon
11.	10th Asian Conference on Solid State Ionics (ACSSIS-10)	12-16 June 2006	Co-chair, Organizing Committee: Prof. M.A.K.L. Dissanayake Prof. M.A. Careem
12.	Natioanl Conf. on Advanced Materials for Emerging Technological Applications (NCAMET)	21-22 July 2007	Co-chair, Organizing Committee: Prof. M.A.K.L. Dissanayake Prof. M.A. Careem
13.	Symposium to Felicitate the International Programme in the Physical Sciences, Uppsala, Sweden	10-11 January 2011	Co-chair, Organizing Committee: Prof. M.A.K.L. Dissanayake Prof. M.A. Careem

A letter from the Director, Postgraduate Institute of Science (PGIS) covering the activities organized from 1997 to 2011 is attached. In addition, copies of some conference brochures/flyers are also attached.

7.3 B Dissemination of Knowledge: As Resource a Person at A-Level Science Camps organized by the Science Education Unit of the Faculty of Science, University of Peradeniya.

	Activity	Priod
1.	Science Camp at Viharamahadevi BV, Badulla	9th and 10th April 2005
2.	Science Camp at Kekirawa Central College, Kekirawa	25th and 26th Feb. 2006
3.	Science Camp at Sumana BV, Ratnapura	30th Sept.-1st Oct. 2006
4.	Science Camp at Rajapakshe MV, Weeraketiya	17th & 18th March 2007
5.	Science Camp at KalutaraVidyalaya, Kalutara	7th & 8th July 2007
6.	Science Camp at Welimada Central College, Welimada	28th & 29th Nov. 2009
7.	Science Camp at Central College, Poramadulla	6th & 7th Feb 2007
8	Seminar for A-Level Physics Teachers organized by NIE (at PGIS)	23rd Sept 2010

7.4 Research Collaborations with Recognized Institutions

	Institution	Period
1.	Chalmers University of Technology, Gothenburg, Sweden (Prof. B.-E. Mellander)	From 1985 to 2012 Continuous (IPPS Grant + Swedish Research Council)
2.	Aberdeen University, UK (Prof. A.R. West)	1992-1996 (EEC Grant)
3.	INPG, Grenoble, Francs (Prof. J.pL. Souquet)	1992-1996 (EEC Grant)
4.	Oklahoma University, Norman, OK, USA (Prof. Roger Frech)	1993-1996 (Bilateral)
5.	Denmark Technical Univesity, Lyngby, Denmark (Prof. Steen Skaarup)	1988-2010 (IPPS Grant)
6.	Rajarata University, Mihintale	2010-2011 (Bilateral)

8.

Academic Distinctions: Awards and Fellowships

No.	**Award**	**Year**
1.	**NARESA Merit Award for Scientific Research** carried out on NARESA Research Grants for the project " Study of Solid Electrolytes and Cathode Materials for Solid State Electrochemical Cells. Date of award: 5th December 1993.	**1993**
2.	**Award for the Best Undergraduate Research Project**, at the Peradeniya University Research Sessions 1999 for the project " A direct reading pressure gauge to monitor endotracheal cuff pressure in intensive care patients. Awarded on 20th November 1999. Shared by P.A.R.D. Jayathilaka (undergraduate), M.A.K.L. Dissanayake (Supervisor), N.D. Karunasinghe (Pre-University), W.T.S. Surendra (Pre-University) and R.H. Gunawardane (Consultant Anesisit, TH Peradeniya).	**1999**
3.	**Presidential Award for Research – 2002.** Awarded in recognition of the research publications in peer reviewed journals during the year 2002. Awarded by **His Excellency Mahinda Rajapakse,** President of the Democratic Socialist Republic of Sri Lanka on 30th September 2008..	**2002**
4.	**"Vidya Nidhi" Presidential Award** for contributions made for the development of Scientific Research and Science Education in Sri Lanka. **Presented by Her Excellency Chaandrika Bandaranayake Kumaratunga**, President of the Democratic Socialist Republic of Sri Lanka on 14th November 2005.	2005
5.	**Presidential Award for Research – 2006.** Awarded in recognition of the research publications in peer reviewed journals during the year 2002. Awarded by **His Excellency Mahinda**	2006

	Rajapakse, President of the Democratic Socialist Republic of Sri Lanka on 30th September 2008..	
6.	**National Science Foundation Award for 2007 in the field of Basic Sciences** for the project " (a) solid polymer electrolyte, and (b) conducting polymers, for possible applications in solid state devices". Shared by M.A.K.L. Dissanayake and M.A. Careem. Awarded on 10th November 2007.	2007
7.	**CVCD Award of Excellence for the Most Outstanding Senior Researcher, Physical Sciences (2010)** Selected by the Committee of Vice Chancellors and Directors and Awarded by H.E. the President on 16th December 2011.	2010

8 (B) Fellowships

	Fellowsihp/Associateship	Year
1.	Visiting Research Fellow, University of Aberdeen, UK (one year)	1992/1993
2.	Postdoctoral Research Associate, University of Oklahoma, USA (one year)	1993/1994
3.	Postdoctoral Fellowship from UPPS, Uppsala for 8 months to carry out research at Chalmers University, Gothenburg, Sweden	2001

9.

Supervision of Postgraduate Students

(a) **During 1991-1997 period, <u>prior</u> to the establishment of the Postgraduate Institute of Physics (PGIS).** These programmes were administered by the **Faculty of Science**, Higher Degrees Committee and the degrees were granted by University of Peradeniya.
All these are students working on Full-time for their posrgraduate degrees

No.	**Project/Student/Degree/Year**	Year
1.	*Electrical conductivity and phase diagram studies of some solid electrolytes based on Li2SO4 and Na2SO4* **P.W.S.K. Bandaranayake**, **Ph.D. (1991)** Supervisors: M.A.K.L. Dissanayake, M.A. Careem. B.-E. Mellander	1991
2.	*Preparation and characterization of some selected ceramic superconduators.* **S.H.S.P. Samarappuli, Ph.D. (1996**). Supervisors: M.A.K.L. Dissanayake, H.R. Ott and O.A. Ileperuma.	1996
3.	*Synthesis and characterization of LISICON type ionic and mixed*	1996

	conductors based on Li4XO4: X=Si,Ge,Ti. **H.H. Sumathipala, Ph.D. (1996)** Supervisors: M.A.K.L. Dissanayake and A.R. West.	
4.	*Electrical Properties of Telurium oxide based glasses* **G.D.L.K. Jayasinghe, Ph.D. (1996)** Supervisors: M.A.K.L. Dissanayake and J.-L. Souquet	1996
5.	*Studies on slected conjugated conducting polymers, polymer electrolytes and inorganic electrolytes.* **G.K.R. Senadeera, Ph.D. (1996).** Supervisors: M.A.K.L. Dissanayake, M.A. Careem, S. Skaarup and K. West.	1996
6.	*Ionic conductivity and Phase diagram studies of Li2SO4-Li3PO4 system.* **C.N. Wijayasekera, M.Phil. (1991).** Supervisors: M.A. Careem, M.A.K.L. Dissanayake, B.-E. Mellander.	1991
7.	*Study of characteristics of thin film solid state cells.* J**. Karunamuni, M.Sc. by Research (2+ years) (1988).** Supervisor: M.A.K.L. Dissanayake	1998
8.	*An investigation of the elastic properties of some local banana fibres.* **B.A. Karunaratne, M.Sc. by Research (2+ years) (1998).** Supervisors: M.A.K.L. Dissanayake.	1998
9.	*Preeparation and investigation of electrical properties of some oxide thermistors.* **S. Gnanasundaram, M.Sc. (by Research) (2+ years) 1988**. Supervisors: M.A.K.L. Dissanayake.	1988

(b) After 1997, the administration of all the postgraduate programmes of the Faculty of Science, University of Peradeniya were transferred to the **Postgraduate Institute of Physics (PGIS).** The degrees were granted by University of Peradeniya.
All these are <u>full time</u> research students.

No.	**Project/Student/Degree/Year**	Year
1.	*Synthesis, characterization and electrical properties of some solid polymer electrolytes based on poly(ethelene oxide), PEO.* **L.R.A.K. Bandara, Ph.D. Thesis, PGIS/University of Peradeniya (2000)** Supervisors: M.A.K.L. Dissanayake and B.-E. Mellander	2000
2.	*Solid Polymer Electrolytes based on Polyacrylonitrile (PAN) and organically modified ceramics (Ormocers)* **Ms. G.A.Kumudu S. Perera, Ph.D. Thesis, PGIS/University of Peradeniya (2000)** Supervisors: M.A.K.L. Dissanayake, P.W.S.K. Bandaranayake, Prof. Steen Skaarup and Dr. Keld West.	2000
3.	*Effect of nano size alumina and titania fillers on ionic conductivity of some polymer electrolytes.* **K. Vignarooban**, **M.Phil. Thesis PGIS/University of Peradeniya (2007).** Supervisor: M.A.K.L. Dissanayake	2001

4.	*Electrical Properties of PAN based and PPG based polymer electrolytes* **W.A. Samantha, M.Phil. Thesis, PGIS/University of Peradeniya (2001)** Supervisors: M.A.K.L. Dissanayake, and Prof. B.-E. Mellander	2001
5.	*Geology, microstructure and chemistry of some vein graphite deposits of Sri Lanka*. **N.W. Balasooriya**, **M.Phil Thesis, PGIS/University of Peradeniya (2001).** Supervisors: K. Dahanayake, M.A.K.L. Dissanayake, H.M.N. Bandara	2001
6.	*Study of Electrical Conductivity and Dielectric Relaxation of PEO Based Composite Polymer Electrolytes and PAN Based Polymer Electrolytes* **P.A.R.D. Jayathilaka, M.Phil. Thesis, PGIS/University of Peradeniya (2003)** Supervisors: M.A.K.L. Dissanayake and B-E. Mellander	2003
7.	*Study of Thermal and Electrical Properties of Some Polymer Electrolytes Based on PEO and PAN and Some Intermediate Temperature Solid Oxide Fuel Cell Materials Based on Gadolinia Doped Ceria* **R.S.P. Bokalawela, M.Phil. Thesis, PGIS/University of Peradeniya (2004).** Supervisors: M.A.K.L. Dissanayake, B-E. Mellander, P.W.S.K. bandaranayake	2004
8.	Synthesis and characterization of some PEO-based, nano-composite polymer electrolytes. **H.M.J.C. Pitawala**, **M.Phil. Thesis PGIS/University of Peradeniya (2008).** Supervisor: M.A.K.L. Dissanayake	2008
9.	*Synthesis and characterization of Li transition-metal oxide electrode materials and their applications in Li-ion batteries.* **Pushpaka B. Samarasinghe, M.Phil Thesis, PGIS/University of Peradeniya (2009).** Research carried out at Institute of Fundamental Studies, Kandy; Some measurements were done at Peradeniya SSI Labs; Co-supervised by Prof. M.A.K.L. Dissanayake and Dr. Athula Wijayasinghe (IFS).	2009
10.	Synthesis and characterization of Polyethylene oxide (PEO) based and Polyacrilonitrile (PAN) based polymer electrolytes….. **T.M.W.J. Bandara, Ph.D. Thesis, PGIS/University of Peradeniya (2010)** Supervisors: M.A.K.L. Dissanayake and B.-E. Mellander	2010

Supervision of M.Sc. Research Projects for M.Sc. Degrees offered by the PGIS: These programmes consist of 15 months of course work and a 6 month full time research project.

No.	**Project/Student/Degree/Year**	Year
1.	*Improving student understanding of introductory level Physics- Mechanics- through computer based interactive methods.* **D.M.T.H. Dissanayake, M.Sc. (Science Education) 2003** Supervisor: M.A.K.L. Dissanayake	2003
2.	*Making G.C.E. Advanced Level (A/L) Physics more attractive through improved teaching at pre-GCE (A/L) classes.* **T.K. Amunugama, M.Sc. (Science Education) 2003** Supervisor: M.A.K.L. Dissanayake	2003
3.	*Teaching Thermal Physics through Computer Based Interactive Lecture Demonstrations and Laboratory Sessions..* **R.W.Y.M. Dayaratne, M.Sc. (Science Education) 2001** Supervisor: M.A.K.L. Dissanayake	2001
4.	*Conceptual knowledge representations for different levels of Physics learners.* **Ms. P.S. Skantharajah**, **M.Sc. (Science Education)-2000.** Supervisor: M.A.K.L. Dissanayake	2000
5.	*A demonstration experiment in Bernoulli's principle for advanced level Physics.* **T. Rajkumar**, **M.Sc. (Science Education) 2000** Supervisor: M.A.K.L. Dissanayake	2000
6.	*Identification of some learning difficulties of Physics Concepts in Fields among GCE A-L students and suggested recommendations to teachers.* K. Baskaran **M.Sc. (Science Education) 2001** Supervisor: M.A.K.L. Dissanayake	2001
7.	*Assessment of conceptual knowledge of G.C.E. (Advanced Level) students using the Force Motion Concept Inventory.* **N. Jeganmohan, M.Sc. (Science Education) 2005**. Supervisor: M.A.K.L. Dissanayake	2005
8.	*Transport properties of polymer electrolytes based on polyethylene oxide complexed with copper salts.* **P.A.M.T. Jayathilaka, M.Sc. (Physics of Materials) 2003.** Supervisor: M.A.K.L. Dissanayake	2003
9.	*Dye sensitized photoelectrochemical (PEC) solar cells using PEO based solid polymer electrolyte.* **K.K. Varaprathan, M.Sc. (Physics of Materials) 2006.** Supervisor: M.A.K.L. Dissanayake	2006
10.	*Transport properties of polyethylene oxide based electrolytes complexed with Cu salts.*	2004

	S. Udakara, M.Sc. (Physics of Materials) 2004. Supervisor: M.A.K.L. Dissanayake	
11.	*Transport properties of polyethylene oxide based electrolytes complexed with Mg salts..* **L.H. Karaliyadda, M.Sc. (Physics of Materials) 2004.** Supervisors: M.A.K.L. Dissanayake and L.R.A.K. Bandara	2004
12.	*Mixed cation effect in efficiency enhancement in quasi-solid state dye sensitized solar cells* **Rasanjali Jayatissa, M.Sc. (Nanoscience & Nanotechnology) 2012** Supervisors: M.A.K.L. Dissanayake & V.A. Seneviratne	2012

10. Examination of Dissertations

	Name of Student/Degree	**Year**
1.	Ms. Mahendralingam, M.Phil. in Chemistry, PGIS	2003
2.	T.M.T.N. Tennakoon, Ph.D. in Physics, PGIS	1998