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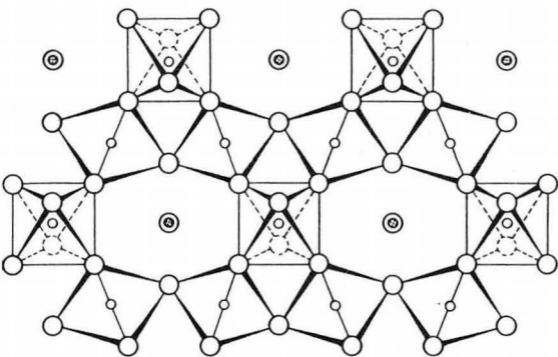
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**5TH
INTERNATIONAL
CONFERENCE ON
SOLID STATE
IONICS**



**Lake Tahoe
USA**

AUGUST 18-24, 1985



PUB-482

INTERNATIONAL SCIENTIFIC COMMITTEE

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Power Sources, Bulgaria
S. Chandra – Banaras Hindu University, India
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PLENARY SESSIONS

Plenary Session A

Monday, 11:25 - 12:25

Chairman: J.B. Bates

- A-1 D.W. Murphy, Insertion Reaction Electrode Materials
- A-2 H. Schulz, Application of Diffraction Methods to Study Fast Ionic Conductors

Plenary Session B

Monday, 4:00 - 5:00

Chairman: G.C. Farrington

- B-1 M. Armand, Polymer Electrolytes
- B-2 P. Vashishta, Use of Computer Simulation Techniques to Study Atomic Migration in Solids

Plenary Session C

Tuesday, 10:55 - 11:55

Chairman: P. Hagemuller

- C-1 A. Clearfield, M.A. Subramanian, P.R. Rudolf, and A. Moini, Stoichiometry, Structure and Conductivity of NASICON
- C-2 B. Sapoval, M. Rosso, J.F. Gouyet, and J.F. Colonna, Dynamics of the Creation of Fractal Objects by Intercalation

Plenary Session D

Wednesday, 11:25 - 12:25

Chairman: J. Schoonman

- D-1 B. Dunn, Recent Developments in Beta⁺ Aluminas
- D-2 I.D. Raistrick, The Application of Impedance Spectroscopy to Problems in Solid State Ionics

Plenary Session E

Wednesday 4:00 - 5:00

Chairman: T. Takahashi

- E-1 P. Heitjans, Use of Beta Radiation-Detected NMR to Study Ionic Motion in Solids
- E-2 S.H. Liu, T. Kaplan and L.J. Gray, AC Response of Fractal Interfaces

Plenary Session F

Thursday 11:25 - 12:25

Chairman: C.A. Vincent

- F-1 C.A. Angell, Recent Developments in Fast Ion Transport in Glassy and Amorphous Materials
- F-2 P.G. Dickens, and S. Crouch-Baker, Hydrogen Insertion Compounds of Transition Metal Oxides

Plenary Session G

Thursday 4:00 - 5:00

Chairman: W. Weppner

- G-1 M. Kleitz, P. Fabry, J.F. Million-Brodaz, and E. Siebert-Mantel, Solid Ionic Conductors in Chemical Sensors
- G-2 F.J. Salzano, Application of Solid Oxide Electrolytes to Water Vapor Electrolysis

SCHEDULE

Sunday, August 18

7:00 PM Reception at Northstar

Monday, August 19

8:30 AM Contributed Session 1
 Auditorium 1-A Theory (TH-1 - TH-7)
 Blue Room 1-B Polymers (P-1 - P-7)
 Red Room 1-C Glasses (G-1 - G-7)
 Green Room 1-D Alkali Conductors (AC-1 - AC-7)

10:35-11:25 Refreshments, Posters for Session 1, A-D

11:25-12:25 Plenary Session A
 A-1 D.W. Murphy
 A-2 H. Schulz

12:30-1:15 Lunch at Truckee High School

1:20-3:00 Contributed Session 2
 Auditorium 2-A Beta Alumina (BA-1 - BA-8)
 Blue Room 2-B Oxide Conductors (O-1 - O-8)
 Red Room 2-C Electrode Materials (EM-1 - EM-8)
 Green Room 2-D Experimental Techniques (ET-1 - ET-8)

3:00-4:00 Refreshments, Posters for Session 2, A-D

4:00-5:00 Plenary Session B
 B-1 M. Armand
 B-2 P. Vashishta

Tuesday, August 20

8:30-9:54 Contributed Session 3
 Auditorium 3-A Theory (TH-8 - TH-14)
 Green Room 3-B Alkali Conductors (AC-8 - AC-14)
 Blue Room 3-C Nasicon (NA-1 - NA-7)
 Red Room 3-D Glasses (G-8 - G-14)

9:55-10:55 Refreshments, Posters for Session 3, A-D

10:55-11:55 Plenary Session C
 C-1 A. Clearfield
 C-2 B. Sapoval

7:00 PM OUTDOOR BARBECUE AT NORTHSTAR

Wednesday, August 21

9:00-10:24 Contributed Session 4
 Auditorium 4-A Theory (TH-15 - TH-21)
 Blue Room 4-B Proton Conductors (PC-1 - PC-7)
 Red Room 4-C Polymers (P-8 - P-14)
 Green Room 4-D Interfacial Effects (I-1 - I-7)

10:25-11:25 Refreshments, Posters for Session 4, A-D

11:25-12:25 Plenary Session D
 D-1 B. Dunn
 D-2 I.D. Raistrick

12:30-1:15 Lunch at Truckee High School

1:20-3:00 Contributed Session 5
 Green Room 5-A Batteries (B-1 - B-8)
 Blue Room 5-B Oxide Conductors (O-9 - O-16)
 Red Room 5-C Electrode Materials (EM-9 - EM-16)
 Auditorium 5-D Beta Alumina (BA-9 - BA-16)

3:00-4:00 Refreshments, Posters for Session 5, A-D

4:00-5:00 Plenary Session E
 E-1 P. Heitjans
 E-2 S. Liu

Thursday, August 22

9:00-10:24
Auditorium
Blue Room
Red Room
Green Room

Contributed Session 6
6-A Theory (TH-22 - TH-28)
6-B Alkali Conductors (AC-15 - AC-21)
6-C Glasses (G-15 - G-21)
6-D Electrolytes, General (EG-1 - EG-7)

10:25-11:25 Refreshments, Posters for Session 6, A-D

11:25-12:25 Plenary Session F
F-1 C.A. Angell
F-2 P.G. Dickens

12:25-1:15 Lunch at Truckee High School

1:20-3:00
Auditorium
Red Room
Blue Room
Green Room

Contributed Session 7
7-A Beta Alumina (BA-17 - BA-24)
7-B Electrode Materials (EM-16 - EM-23)
7-C Experimental Techniques (ET-9 - ET-15)
7-D Fluoride Conductors (FC-1 - FC-4)
Other Applications (OA-1 - OA-4)

3:00-4:00 Refreshments, Posters for Session 7, A-D

4:00-5:00 Plenary Session G
G-1 M. Kleitz
G-2 F.J. Salzano

7:00 PM CONFERENCE BANQUET, TOP OF SQUAW VALLEY

Friday, August 23

9:00-10:24
Auditorium
Red Room
Blue Room
Green Room

Contributed Session 8
8-A Theory (TH-29 - TH-35)
8-B Glasses (G-22 - G-28)
8-C Other Conductors (OC-1 - OC-7)
8-D Sensors (S-1 - S-5)

10:25-10:45 Refreshments

10:45-11:45
Auditorium
Blue Room
Red Room

Contributed Session 9
9-A Polymers (P-15 - P-19)
9-B Other Conductors (OC-8 - OC-12)
9-C Alkali Conductors (AC-23 - AC-24)
Glasses (G-29 - G31)

11:45-12:45 Posters for Session 8, A-D & 9, A-C

Afternoon Free

Authors Please Note:

Please mount your posters on the poster boards BEFORE the Poster Session at which they are to be presented.

Also, please take them down IMMEDIATELY AFTER your Poster Session, so that the boards are available for use for the next Poster Session.

- SESSION I-A**
THEORY
- Chairman:
K. Funke
- Monday AM
- TH-1 Donald R. Franceschetti, Equivalent Circuits for Reaction Diffusion Sequences at Three-Phase Electrodes
- TH-2 J.E. Hammerberg, Particle Correlations in Silver Chromi- um Sulfide and Selenide Layered Compounds
- TH-3 Stephen D. Druger, A. Nitzan and Mark A. Ratner, Dynamic Bond Percolation and Effective-Medium Models for Ionic Conduction in Polymer Electrolytes
- TH-4 A.N. Cormack and C.R.A. Catlow, Ionic Transport in Anion Deficient Fluorite Oxides
- TH-5 J.C. Wang and N.J. Dudney, Model for the Composition Dependence of Conductivity of an Ionic Conductor Containing Submicron Insular Particles
- TH-6 J.L. Bjorkstam, J. Listerud and M. Villa, NMR T_1 and Linewidth Narrowing in Superionics - a Consistent Interpretation
- TH-7 B.V.R. Chowdari, P.S. Neelakantaswamy and S.K. Akhter, Application of the Logarithmic Law of Mixing for the Estimation of Complex Permittivity and Electrical Conductivity of Fast Ion Conductors at Microwave Frequencies

- SESSION I-B**
POLYMERS
- Chairman:
B.C.H. Steele
- Monday AM
- P-1 J.J. Fontanella, M.C. Wintersgill, J.P. Calame, M.K. Smith, P.J. Welcher, and C.G. Andeen, DCS, Dielectric Relaxation and High Pressure Conductivity Studies of Poly(Propylene Oxide) Complexed with Alkali Metal Salts
- P-2 D.F. Shriver, P.M. Blonsky, L.C. Hardy, H.R. Allcock, P. Austin and J. Sisko, New Polyphosphazene and Polyelectrolyte Solid Electrolytes
- P-3 Paola Ferloni, Aldo Magistris and Manlio Sanesi, Ion Transport and Thermal Properties of Polyethylene Oxide - Lithium Perchlorate Complexes
- P-4 Dale Teeters and Roger Frech, Temperature-Dependent Spectroscopic Studies of Poly(Propylene Oxide) and Poly(Propylene Oxide)-Inorganic Salt Complexes
- P-5 Yukio Ito, Kiyooki Shakushiro, Katsuki Miyauchi and Tetsuichi Kudo, Structure and Ionic Conductivity in Evaporated Thin Films of Poly(Ethylene Oxide) Complexed with $LiCF_3SO_3$
- P-6 N.L.D. Somasiri, A.G. MacDiarmid and A.R. McGhie, Characterization and Thermal Stability of Polyaniline $(ON)_x$
- P-7 Fiona M. Gray, James R. MacCallum and Colin A. Vincent, Poly(Ethylene Oxide)- $LiCF_3SO_3$ -Polystyrene Electrolyte Systems

- SESSION I-C**
GLASSES
- Chairman:
S. Susman
- Monday AM
- G-1 Annie Pradel and Michel Ribes, Electrical Properties of Lithium Conductive Sulfur Glasses Prepared by Twin Roll Quenching
- G-2 M. Devaud, J.-Y. Prieur and W.D. Wallace, Pseudospin Echoes in a Family of Ionic Conducting Lithium Borate Glasses
- G-3 Gaetano Chiodella, Aldo Magistris and Marco Villa, Ionic Conductivity and Glass Transition of Borophosphate Glasses
- G-4 K.L. Ngai and H. Jain, Conductivity Relaxation and Spin Lattice Relaxation in Lithium and Mixed Alkali Borate Glasses Activation Enthalpies, Anomalous Isotope-Mass Effect and Mixed Alkali Effect
- G-5 John H. Kennedy, Saeed Sahami, Steven W. Shea and Z. Zhang, Preparation and Conductivity Measurements of SiS_2-Li_2O Glasses Doped with LiBr and LiCl
- G-6 R. Mercier, M. Tachez, J.P. Malugani and A.J. Dianoux, Quasielastic Neutron Scattering from $AgPO_3-AgI$ Glass
- G-7 S. Rokade, K. Singh and V.H. Deshpande, Effect of Addition of $LiNbO_3$ on the Electrical Conductivity of $Li_2O-B_2O_3$ System

- SESSION 1-D**
ALKALI CONDUCTORS
- Chairman:
J.B. Wagner Jr
- Monday AM
- 1-1 Roger Frech and Enzo Cazzanelli, Sulfate Ion Configuration in Monoclinic and Cubic Lithium Sulfate
- 1-2 A.L. Laskar, and P.A. Cardegna, Size Effect of the Alkali Ions on the Diffusion Rates in Silver Halides
- 1-3 F. d'Yvoire, M. Pintard-Screpel and E. Bretey, Polymorphism and Cation Transport Properties in 3D Skeleton Arsenates $\text{Na}_3\text{M}_2(\text{AsO}_4)_3$ (M = Al, Ga, Cr, Fe)
- 1-4 S. Yoshikado, T. Ohachi, I. Taniguchi, Y. Onoda, M. Watanabe and Y. Fujiki, Ionic Conduction in (K,Rb)-Al-Priderites with Hollandite Structure
- 1-5 F. Baech, C.R.A. Catlow, A.V. Chadwick and G. McIntyre, A Single Crystal Neutron Diffraction Study of The Superionic KCaF_3
- 1-6 Arnold Lunden and Hakan Ljungmark, Electrical Conductivity, Self-Diffusion and Phase Diagram of Lithium Sulfate - Lithium Chloride
- 1-7 Yu Wen-hai and Yang Yuan, Effect of Phase Separation and Crystallization of the Conductivity of a-FIC

- SESSION 2-A**
BETA ALUMINA
- Chairman:
S. Chandra
- Monday PM
- 2-1 K.G. Frase, R.S. Roth and A. Santoro, Neutron Diffraction of 'B' and B"-Alumina Phases of the Same Composition
- 2-2 R. Wong, W.L. Roth and B. Dunn, EXAFS Studies of ND in Beta"-Alumina Single Crystal
- 2-3 G. Lucazeau, J.R. Gavarrí and A.J. Dianoux, Study of Na^+ Motions in Beta Al_2O_3 by Quasi Elastic Neutron Scattering Measurements
- 2-4 S. Chen, D.R. White, M. Sankararaman, H. Sato, J.B. Lewis, and W.R. Robinson, Conductivity and Structural Analysis of Co^{2+} Stabilized Beta"-Alumina
- 2-5 John O. Thomas, Anders Eriksson, Jorgen Kjeem and Amanda Petford, A Combined HRXD and HREM Study of Degradation Collapse in $\text{NH}_4^+/\text{H}_3\text{O}^+$ Beta"-Alumina
- 2-6 G. Mariotto, Raman Spectra of Cadmium Containing Beta-Alumina Crystals
- 2-7 Peter K. Davies, Amanda Petford and Michael O'Keeffe, Investigations of Cation Order in Nd-, Gd- and Eu Beta" Alumina Using High Resolution TEM
- 2-8 G. Staikov, P.D. Yankulov and E. Budevski, Nonstandard Behavior of Polycrystalline Beta/Beta"-Alumina Membranes in Sodium Environment

- SESSION 2-B**
OXIDE CONDUCTORS
- Chairman:
A.J. Burggraaf
- Monday PM
- 3-1 Wen Tinglian, Li Xiafei, Kuo Zhuokun and W. Weppner, Conductivity of MgO-Doped ZrO_2
- 3-2 Kichiro Koto, Haruki Mori and Yoshiaki Ito, Oxygen Disorder in the Fluorite-Type Conductors $(\text{Bi}_2\text{O}_3)_{1-x}(\text{Gd}_2\text{O}_3)_x$ by X-ray and EXAFS Analyses
- 3-3 I. Riess, M. Ricken and J. Noeltig, Specific Heat of Non-Stoichiometric CeO_2
- 3-4 S. Suzuki, H. Iwahara and M. Tanaka, Incommensurate Structures in the f.c.c. Phase of Stabilized Bi_2O_3
- 3-5 P.D. Battle, C.R.A. Catlow and L.M. Moroney, A Structural Study of the Mixed Oxide Conductor M_2O_3 -Doped Bi_2O_3
- 3-5 C. Houttemane, J.C. Boivin, D. Thomas, A. Tairi, J.C. Champarnaud-Mesjard, D. Mercurio and B. Frit, Phases Stability and Conduction Properties in the Bi_2O_3 - PbO - PbF_2 System
- 3-7 Meng Guang-yao, Cao Wun-qing and Peng Ding-kun, Chemical Synthesis and Conductivity Study of Doped Mullite Solid Solutions
- 3-1 S. Dou, P.D. Pacey, C.R. Masson and B. Marple, Grain Growth in Lime-Stabilized Zirconia in the Presence of a Liquid Phase

- SESSION 2-C**
ELECTRODE MATERIALS
- Chairman:
M. Greenblatt
- Monday PM
- EM-1 C. Greaves, A.M. Speed and M.A. Thomas, Structure of the Mixed Conductor $Ni_{2}O_{3}H$ by Powder Neutron Diffraction
- EM-2 J.M. Tarascon, Electrochemical Insertion of Lithium and Sodium into the Two Crystallographic Forms of a New Molybdenum Chalcogenide Phase $Mo_{15}Se_{19}$
- EM-3 L.A. De Picciotto and M.M. Thackeray, Lithium Insertion, Extraction Reactions with $LiVO_{2}$ and $LiV_{2}O_{4}$
- EM-4 M.T. Weller and P.G. Dickens, Lithium Insertion Reactions in Uranium Oxide Phases
- EM-5 Boye Knutz and Steen Skaarup, Discharge of Solid State $Li_{3}N+TiS_{2}$ Composite Electrodes
- EM-6 Ned A. Godshall, Lithium Transport Kinetics in Ternary Lithium-Copper-Oxygen Cathode Materials
- EM-7 P.G. Bruce, M.G.S.R. Thomas and J.B. Goodenough, Lithium Insertion into $Li_{x-1}CoO_{2}$
- EM-8 D.W. Murphy, R.J. Cava, K. Rhyne, R.S. Roth, S.M. Zahurak and J.L. Dye, Structural Aspects of Alkali Metal Insertion Compounds with the Pyrochlore Structure

- SESSION 2-D**
EXPERIMENTAL TECHNIQUES
- Chairman:
B.A. Boukamp
- Monday PM
- ET-1 Werner Wepner, Electrochemical Characterization and Preparation of Semiconducting Materials
- ET-2 Y. Onoda, Y. Fujiki, S. Yoshikado, T. Ohachi and I. Taniguchi, NMR Study of One-Dimensional Ionic Conductor with Hollandite-Type Structure IV. Rb-Priderite
- ET-3 A. Fontana, G. Mariotto, E. Cazzanelli, F. Rocca, V. Mazzacurati, G. Ruocco and G. Signorelli, Disorder Induced Scattering in Beta-AgI
- ET-4 Noboru Matsui, Equivalent Circuit Analysis of High Temperature Solid Electrolyte
- ET-5 H. Kahil, E.J.L. Schouler, M. Forestier and J. Guillon, Characterization of the Solid Composite Electrode MnO_{2} -gamma, Acetylen Black; HUP/HUP by Impedance Spectroscopy
- ET-6 S. Linderoth, H.E. Hansen, A. Shishkin, S. Skaarup, N.H. Andersen, M.D. Bentzon and K. Petersen, Some Superionic Studies by Positrons
- ET-7 Monisha Bose and Anjali Basu, NMR Studies of the Mixed Conductor $Li_{x}V_{2}O_{5}$
- ET-8 Kuo-chih Chou and Shuang-lin Chen, Electrochemical Determination of the Thermodynamic Property of Intermediate Compound in Mo-O System

- SESSION 3-A**
THEORY
- Chairman:
D. Franceschetti
- Tuesday AM
- TH-8 R.O. Rosenberg, A. Nitzan and M.A. Ratner, Effective Potentials from Langevin Dynamics Simulations of Framework Solid Electrolytes
- TH-9 Bernard A. Boukamp, A Package for Impedance/Admittance Data Analysis
- TH-10 L. Borjesson, S.W. Martin, L. Torell and C.A. Angell, Sequential Hypersonic Dampings Due to Fast Ion Diffusion and Viscous Relaxation in AgI-Rich Ionic Liquids
- TH-11 A. Bunde, W. Dieterich, and E. Roman, Monte Carlo Studies of Ionic Conductors Containing an Insulating Second Phase
- TH-12 C.R.A. Catlow and M.L. Wolf, Molecular Dynamics Simulation Studies of Li^{+} Ion Conductors
- TH-13 J.H. Newton-Howes and A.N. Cormack, Computer Simulation of Ni^{2+} in Hexagonal WO_{3}
- TH-14 Caroline S. Harris, A. Nitzan, Mark A. Ratner and D.F. Shriver, Particle Motion Through a Dynamically Disordered Medium: The Effects of Correlation and Application to Polymer Solid Electrolytes

- SESSION 3-B**
ALKALI CONDUCTORS
- Chairman:
W. Rickert
- Tuesday AM
- AC-8 Q.G. Liu and W.L. Worrell, Electrical and Thermodynamic Properties of $\text{Li}_2\text{SO}_4\text{-Ag}_2\text{SO}_4$ Solid Electrolytes
- AC-9 B. Schoch, E. Hartmann and W. Weppner, New Fast Solid Lithium Ion Conductors at Low and Intermediate Temperatures
- AC-10 S. Suzuki, M. Tanaka, M. Ishigame, T. Suemoto, Y. Shibata, Y. Onoda and Y. Fujiki, Interchannel Correlation of Mobile Ions in Hollandites
- AC-11 M. Gregorkiewicz, Alkali Ion Diffusion in $\text{M}'(\text{AlSiO}_4)$ Compounds with Frameworks of the Tridymite Topology and its Variants
- AC-12 M. Bose, A. Basu and D. Torgenson, Dynamics of the Lisicon from ^7Li NMR
- AC-13 K. Shahi and G.P.S. Gopalan, Some Na_2SO_4 -Based Fast Ion Conductors
- AC-14 Lin Zu-xiang, Yu Hui-jun, Li Shi-chun and Tian Shun-bao, Phase Relationship and Electrical Conductivity of $\text{Li}_{1+x}\text{Ti}_{2-x}\text{Ga}_x\text{P}_3\text{O}_{12}$ and $\text{Li}_{1+2x}\text{Ti}_{2-x}\text{Mg}_x\text{P}_3\text{O}_{12}$ Systems

- SESSION 3-C**
NASICON
- Chairman:
W.L. Roth
- Tuesday AM
- NA-1 W.H. Baur, J.R. Dygas, D.B. Whitmore and J. Faber, Time-of-Flight Neutron Powder Diffraction Study of $\text{Na}_2\text{Zr}_2\text{SiP}_2\text{O}_{12}$ and $\text{Na}_3\text{Zr}_2\text{Si}_2\text{PO}_{12}$
- NA-2 J.J. Didiisheim, E. Prince and B.J. Wuensch, Neutron Rietveld Analysis of Structural Changes in Nasicon Solid Solutions $\text{Na}_{1+x}\text{Zr}_2\text{Si}_x\text{P}_{3-x}\text{O}_{12}$ at Elevated Temperatures
- NA-3 G. Lucazeau, M. Barj, C. Delmas and A.J. Dianoux, Quasi-Elastic and Inelastic Neutron Scattering Study of $\text{Na}_3\text{Cr}_2(\text{PO}_4)_3$, $\text{NaZr}_2(\text{PO}_4)_3$, $\text{Na}_4\text{MgZr}(\text{PO}_4)_3$
- NA-4 Masayuki Nagai and Tasashi Nishino, Na-K Exchange of the Nasicon-Type Structural Compounds
- NA-5 Joachim Maier and Udo Warhus, Thermodynamic and Electrochemical Investigations of the Nasicon Solid Solution System
- NA-6 J.P. Boilot, Ph. Colomban and G. Collin, Nasicon: Amorphous to Crystalline Compounds
- NA-7 J.R. Dygas and M.E. Brodwin, Frequency-Dependent Conductivity of Nasicon Solid Electrolytes in the Microwave Range

- SESSION 3-D**
GLASSES
- Chairman:
B. Scrosati
- Tuesday AM
- G-8 Marco Villa and Gaetano Chiodelli, P_2O_5 Based Vitreous Electrolytes: Identification of the Structural Units by ^{31}P NMR-MAS
- G-9 Michel W. Barsoum and Harry L. Tuller, In-Situ Determination of the Kinetics of Reaction Between Lithium and Fast Ion Conducting Lithium Borate Glasses
- G-10 P.M. Schleitweiler and W.B. Johnson, Divalent Conduction in $\text{PbI}_2\text{-PbO-B}_2\text{O}_3$ Glasses
- G-11 P. Bean and M. Tomozawa, Thermoelectric Power Measurements of Silver-Containing Glasses
- G-12 A. Pechenik, D.W. Whitmore, M.A. Ratner and S. Susman, Ionic Conductivity in Glasses: A Monte Carlo Study of Ordered and Disordered One-Dimensional Models
- G-13 James A. Bruce, Malcolm D. Ingram, and Margaret A. MacKenzie, Ionic Conduction in Glasses: a New Look at the Weak Electrolyte Theory
- G-14 K.A. Murugesamoorthi and S. Radhakrishna, Studies on $\text{AgI-Ag}_4\text{P}_2\text{O}_7$ Superionic Conducting Glass System

- SESSION 4-A**
THEORY
- Chairman:
R.J. Friauf
- Wednesday AM
- TH-15 P. Dalard, D. Deroo and D. Pedone, Theoretical Study of the Influence of Ion-Ion Interaction on Intercalation Kinetics
- TH-16 A. Bunde, H. Harder and W. Dieterich, On Diffusion Hindered by Sticks, Site Percolation, and the Mixed Alkali Effect
- TH-17 Y. Boughaleb and M.A. Ratner, Strong Correlation Effects on Ionic Motion in Framework Solid Electrolytes: Computer Simulation of Interacting Particles in Periodic Potentials
- TH-18 I. Ebbsjoe, P. Vashishta, R.K. Kalia and S.W. de Leeuw, Fractal Dimensions of Ionic Trails and Isoets in Superionic Conductors
- TH-19 G. Roth and H. Boehm, Network Analogue for One-Dimensional Solid Ionic Conductors
- TH-20 H. Sato, K. Wada and A. Suzuki, Percolation Efficiency and Mixed Alkali Effect
- TH-21 K. Funke and I. Riess, Debye-Hueckel-Type Relaxation Processes in Solid Ionic Conductors: The Model

- SESSION 4-B**
PROTON CONDUCTORS
- Chairman:
C. Dyer
- Wednesday AM
- PC-1 Wing-Kit Lee, A.S. Nowick and L.A. Boatner, Protonic Conduction in Acceptor-Doped KTaO_3 Crystals
- PC-2 E. Montoneri, E. Findl, F. Kulesa and P.J. Salzano, High Temperature Proton Conductors Note I: Boron and Aluminum Phosphates
- PC-3 H. Iwahara, T. Esaka, H. Uchida, T. Yamauchi and K. Ogaki, High Temperature Type Protonic Conductor Based on SrCeO and Its Application to the Extraction of Hydrogen Gas
- PC-4 S.K. Tolpadi, S. Chandra and S.A. Hashmi, Proton Transport in Ammonium Paratungstate $(\text{NH}_4)_{10}\text{W}_{12}\text{O}_{41} \cdot 5\text{H}_2\text{O}$
- PC-5 C.M. Mari, F. Bonino, M. Catti, R. Pasinetti, S. Pizzini, Electrical Conductivity of $\text{HTaWO}_6 \cdot \text{H}_2\text{O}$ and HTaWO_6
- PC-6 Scott H. Brown and Roger Frech, Spectroscopic Studies of the Fast Proton Conductor Lithium Hydrazinium Sulfate
- PC-7 B.K. Sen and S. Sen, Mechanism of Proton Transport in HUP ($\text{HUO}_2\text{PO}_4 \cdot 4\text{H}_2\text{O}$)

- SESSION 4-C**
POLYMERS
- Chairman:
R.G. Linford
- Wednesday AM
- P-8 A. Bouridah, F. Dalard, D. Deroo, and M. Armand, Potentiometric Measurements of Ionic Mobilities in PEO-LiX Complexes
- P-9 L.L. Yang, R. Hug, G.C. Farrington, G. Chiodelli and A.R. McGhie, Preparation and Properties of PEO Complexes of Divalent Cation Salts
- P-10 W. Gorecki, R. Andreani, C. Berthier, M. Armand, M. Mali, J. Roos and D. Brinkmann, NMR, DSC, and Conductivity Study of a Poly(Ethylene Oxide) Complex Electrolyte: $\text{PEO}(\text{LiClO}_4)_x$
- P-11 C.K. Chiang, G.T. Davis, C.A. Harding and T. Takahashi, Polymeric Electrolytes Based on Poly(Ethylene Imine) and Lithium Salts
- P-12 Sankar Bhattacharja, S.W. Smoot and D.H. Whitmore, A Pulsed Field Gradient NMR Study of Cation and Anion Diffusion in the Amorphous Phase of the Polymer Electrolyte $(\text{PEO})_8\text{LiCF}_3\text{SO}_3$
- P-13 Teresa Abrantes, Luis Alcacer and Cesar Sequeira, Thin Film Solid State Polymer Electrolytes Containing Silver and Copper Ions as Charge Carriers
- P-14 Toru Takahashi, G.T. Davis, C.K. Chiang and C.A. Harding, Chemical Modification of Poly(Ethylene Imine) for Polymeric Electrolyte

nesday AM

SESSION 4-D
INTERFACIAL EFFECTS

Chairman:
T. Cole

S.P.S. Badwal, F.T. Ciacchi and D.K. Sood, Interface between Cosintered (U,M)O_{2+x} Electrodes and Yttria Zirconia Electrolyte

J.A. Kilner, A.E. McHale, B.C.H. Steele, M. van Hemert and A.J. Burggraaf, Oxygen Surface Exchange and Diffusion in Fast Ionic Conductors

Bang C. Nguyen and David M. Mason, Electrocatalytic Mechanisms in the Oxidation of CO on a Scandia Stabilized Zirconia Electrolyte Surface

D. Gozzi, L. Petrucci and M. Tomellini, Cyclic Voltammetry at Metal-Zirconia Electrolyte Interface

J.B. Bates and J.C. Wang, Impedance of Metal-Solid Electrolyte Interfaces

F. Bonino and B. Scrosati, The Lithium-Polymer Electrolyte Interface

S.P.S. Badwal and F.T. Ciacchi, Microstructure of Pt Electrodes and its Influence on the Oxygen Transfer Kinetics

nesday PM

SESSION 5-A
BATTERIES

Chairman:
J.J. Smith

A.J. Patrick, M.D. Glasse, R.J. Latham and R.G. Linford, Novel Solid State Polymeric Batteries

O. Yamamoto, Y. Takeda, R. Kanno and Y. Ikeda, Rechargeable Solid Electrolyte Cells with a Copper Ion Conductor, Rb₄Cu₁₆I₇Cl₁₃

J.R. Owen, R.D. Rudkin and B.C.H. Steele, Thin Film Arrays of Lithium - PEO Cells

H.S. Maiti and N.C. Chakrabish, Complex Impedance Behavior of the Cell Li/LiClO₄(PC)/V₆O₁₃

J.B. Phipps, T.G. Hayes, P.M. Skarstad and D.F. Untereker, In-Situ Formation of a Solid/Liquid Composite Electrolyte in Li/I₂ Batteries

J.I. Franco, L. Perissinotti and N.W. Walsoe de Reza, Conductivity of the Binary System Iodine-Phenazine

J.R. Akridge and H. Vourlis, Solid State Batteries.

R.J. Neat, M.D. Glasse, R.G. Linford and A. Hooper, Thermal History and Polymer Electrolyte Structure: Implications for Solid State Battery Design

H. Tributsch and G. Betz, The Photo-Intercalation Battery: Progress and Difficulties POSTER ONLY

nesday PM

SESSION 5-B
OXIDE CONDUCTORS

Chairman:
D.S. Tannhauser

Li Wei Zhang, M. Kobayashi and K.S. Goto, Micromechanism of Formation of Amorphous Thin Films of Li₂O-B₂O₃, Li₂O-SiO₂ and Li₂O-P₂O₅ by PVD

F. Beech, C.R.A. Catlow, A. Santoro and B.C.H. Steele, Structural and Electrical Studies on the Defect Pyrochlore Materials Pb_{1.5}M₂O_{6.5} (M = Ta, Nb)

V.B. Tare, G.M. Mehrotra and J.B. Wagner, Jr., Electrical Transport in NiO-CeO₂ Mixtures

F. Croce, The Effect of the Humidity on the Electrical-Conductivity of "As Received" Commercial ZrO₂/Y₂O₃-Doped Solid Electrolyte

T. Grais, P. Conflant, J.C. Boivin and D. Thomas, High Oxygen Ion Conduction of a Bismuth Oxide-Cadmium Oxide Phase: Conductivity and Transport Number Measurements; Structural Investigations

Meng Guang-yao, Zhou Ming and Peng Ding-kun, A New Phenomenon - The Inductive Impedance in Bi₂O₃ Based Oxygen Ionic Conductors

Shixue Dou, C.R. Masson and P.D. Pacey, Chemical Diffusion in Calcia-Doped Zirconia Ceramic

- SESSION 5-C**
ELECTRODE MATERIALS
- Chairman:
B.E. Lieber
- Wednesday PM
- EM-9 J.M. Tarascon, Topotactic Redox Reactions of One-Dimensional Ternary Molybdenum Chalcogenides Mo_6X_6 ($X = Se, Te$)
- EM-10 A.J. Burggraaf, M.P. van Dijk and K.J. de Vries, Electric Electrochemical Properties of Some Oxygen Catalytic Active Electrode Materials
- EM-11 E.J.L. Schouler, J. Oumari and A. Hammou, Doped Cathodes Zirconia Based Water Vapor Electrolyzers
- EM-12 D.A. Zehnder, B. Dunn and R.F. Bunshah, Transport Properties of Thin Film TiS_2
- EM-13 Keiichi Kanehori, Yukio Ito, Fumiyoshi Kirino, Katsuya Miyauchi and Tetsuichi Kudo, Titanium Disulfide Films Fabricated by Plasma CVD
- EM-14 J.O. Besenhard, P. Komenda, A. Paxinos and M. Josowidlo, Binary and Ternary Li-Alloys as Anode Materials in Rechargeable Organic Electrolyte Li-Batteries
- EM-15 Boryann Liaw, Ian D. Raistrick and R.A. Huggins, Lithium Thermodynamics and Kinetics of the Gamma Lithium Vanadate Bronze Structure

- SESSION 5-D**
BETA ALUMINA
- Chairman:
H. Sato
- Wednesday PM
- BA-9 G. Mariotto, M. Montagna and F. Rossi, Luminescence of Cr³⁺ in Beta-Alumina Crystals
- BA-10 John O. Thomas, Garry J. McIntyre and John DeNuzzio, Alternative Fabrication Route To H_3O^+ Beta"-Alumina via NH_4^+/H_3O^+ Beta"-Alumina
- BA-11 Wilder Carrillo-Cabrera, John O. Thomas and Gregory Farrington, The $Eu^{3+} \rightarrow Eu^{2+}$ Reduction Process in Eu^{3+} Beta"-Alumina
- BA-12 J. Garbarczyk, W. Jakubowski and M. Wasiucionek, On Interactions Between H_2O Molecules and Mobile M^+ Ions/ $M^+ = Li^+, Na^+, Ag^+, K^+, Rb^+, Tl^+$ /of Beta Aluminas
- BA-13 M.W. Breiter, M. Maly-Schreiber and B. Dunn, Conductivity Change During the Replacement of Sodium by Silver Ions in Polycrystalline Beta"-Alumina
- BA-14 G. Collin, J.P. Boilot, Ph. Colomban and R. Comes, Beta"-Alumina - Structure, Local Order and Conductivities
- BA-15 J. Tegenfeldt, J.D. DeNuzzio, and G.C. Farrington, Preparation and Properties of Pb Beta"-Alumina
- BA-16 Maria Zaharescu, Victor Stancovschi, Constanta Parloiu, Nicolae Dragan, Ana Braileanu, Dorel Crisan and, Tudor Surdeanu, Stabilizers for Beta"-Alumina

- SESSION 6-A**
THEORY
- Chairman:
M.A. Ratner
- Thursday AM
- TH-22 Tadao Ishii, Effects of Self-Vibrations for Hopping Conduction
- TH-23 G.E. Murch, A.D. Murray and C.R.A. Catlow, A New Hybrid Scheme of Computer Simulation Based on Hades and Monte Carlo Application to Ionic Conductivity in Y^{3+} Doped CeO_2
- TH-24 Bruce K. Borey and Frederick H. Horne, Effects of Space Charge and Nonuniform Temperature on a Solid State Galvanic Cell
- TH-25 P.W.M. Jacobs and D.A. MacDonall, Computer Simulation Studies of delta-Bismuth Oxide
- TH-26 Peter Nwoye O. Mbaeyi, Model of Diffusion Lengths
- TH-27 P. Vashishta, T. Ebbsjoe and R. Dejus, X-Ray and Neutron Scattering from Ionic Motions in Superionic Conductors
- TH-28 K. Takahashi, I. Mannari and T. Ishii, FK-Model Approach to Coupled Chain System: 3rd-Order Commensurate Ionic Conductors

- SESSION 6-B**
ALKALI CONDUCTORS
- Chairman:
A. Lunden
- rsday AM
- 15 William A. Redman and Roger Frech, Structural and Conductivity Studies in a Sodium-Zinc-Sulfate System
- 16 H. Boehm and G. Roth, Ionic Conductivity of Sodium-Nepheline Single Crystals
- 17 J.L. Bjorkstam, D. Brinkmann, M. Mali, J. Roos, J.B. Phipps, and P.M. Skarstad, NMR Studies in Single Crystal and Dispersed Phase Lithium Iodide
- 18 M.A. Subramanian, R. Subramanian and A. Clearfield, Lithium Ion and Proton Conductors in the System $AB(IV)_2(PO_4)_3$ (B = Ti, Zr, Hf)
- 19 E.I. Cooper and C.A. Angell, Plastic Crystal Fast Li^+ Ion Conductors (PLICFICS) for 25-100°C Applications
- 20 J. Grins, Ionic Conductivity in Compounds Based on Chemical Substitutions in Na_2ZnSiO_4
- 21 L. Boerjesson and L.M. Torell, Raman Spectra of Solid Sulphate Electrolytes; Paddle Wheel Migration Due to Reorientation Motion

- SESSION 6-C**
GLASSES
- Chairman:
J.H. Kennedy
- rsday AM
- 15 G. Carini, M. Cutroni, M. Federico and G. Tripodo, Sound Velocity Behavior in Silver Borate Glasses
- 16 Steve W. Martin, M. Mali, J. Roos and D. Brinkmann, ^{109}Ag NMR Investigations of the Superionic Glasses
- 17 Alberto Schiraldi, Elisabetta Pezzati and Primo Baldini, Transport and Thermodynamic Properties of AgI-Ag Oxysalt(s) Glasses
- 18 L. Boerjesson and L.M. Torell, Brillouin Scattering in Alpha-AgI and AgI Rich Glasses
- 19 A. Avogadro, S. Aldrovandi and F. Borsa, Heat Capacity of Glassy Ionic Conductors $(AgI)_x(Ag_2O \cdot 2B_2O_3)_{1-x}$ Between 1.5 and 40 K
- 20 Heulata Senapati, Studies on Mixed-Anion AgI-Ag₂MoO₄-Ag₂SeO₄ Glass-Forming Fast Ionic Conductors
- 21 K.A. Murugesamoorthi, K. Hariharan and S. Radhakrishna, Superionic Conducting Glass: Glass Formation and Conductivity in the $(AgI)_x-(Ag_3AsO_4)_{5-x}$ System

- SESSION 6-D**
ELECTROLYTES, GENERAL
- Chairman:
W. Sitte
- rsday AM
- 1 S. Chandra, B. Singh and N. Singh, Simultaneous Proton and Oxygen Ion Transport in Solid Molybdic Acid Due to Possible Electrolysis of Interlayer Water of Crystallization
- 2 A.C. Khandkar and J.B. Wagner, Jr., Rapid Ion Transport in Composite Electrolytes
- 3 D.P. Almond and A.R. West, Entropy Effects in Ionic Conductivity
- 4 Gerhard Deublein and Robert A. Huggins, Stability of Alkali Ion-Conducting Solid and Liquid Electrolytes; Thermodynamic Aspects
- 5 W.L. Roth, R. Wong, A.I. Goldman, E. Canova, Y.H. Kao, and B. Dunn, Structure of Additives in Beta-Alumina and Zirconia Superionic Conductors
- 6 Fernando Garzon, Thomas Feist and Peter K. Davies, Effects of Thermal History Upon the Behavior of Crystalline Fast Ionic Conductors
- 7 James A. Bruce and Malcolm D. Ingram, The Mixed Alkali Effect in Crystalline Solid Electrolytes

- SESSION 7-A**
BETA ALUMINA
- Chairman:
M.W. Breiter
- Thursday PM
- BA-17 M.F. Bell, M. Sayer, P.S. Nicholson and M.Z.A. Munshi, Water Vapor Electrolysis Using Hydronium Beta⁺ Alumina. Ion Exchange and Cell Performance
- BA-18 J.D. Barrie, B. Dunn, O.M. Stafsudd and G.C. Farrington, Preparation and Properties of Transition Metal Beta⁺ Aluminas
- BA-19 J.B. Bates and R.L. Anderson, Corrosion of Na Beta⁺ and Na Beta⁺-Alumina in CO₂-H₂O
- BA-20 S.W. Smoot, W.P. Halperin and D.H. Whitmore, Influence of Stoichiometry and the Nature of the Spinel-Block Stabilizing Element on Proton Transport Behavior in Solid Electrolytes with the Beta⁺-Alumina Structure
- BA-21 Maggie Alden, John O. Thomas and Peter Davies, The Effect of Quenching on the Na⁺ Ion Distribution in Na⁺ Beta⁺-Alumina
- BA-22 Patrick S. Nicholson, Masayuki Nagai, Zafar Munshi, Govind Singh, Kimihiro Yamashita, Michael Sayer and Michael Bell, Fabrication, Characterisation and Steam Electrolysis Properties of Polycrystalline H₃O⁺-Beta/Beta⁺-Aluminas
- BA-23 Peter K. Davies, G. Pfeiffer and S. Canfield, Thermodynamic of Mixing in Beta Aluminas - Relation to the Mixed Alkali Effect
- BA-24 S. Chen, N. Otsuka and H. Sato, Evidence of Mobile Ion Correlation Between Conduction Planes in Beta-Alumina

- SESSION 7-B**
ELECTRODE MATERIALS
- Chairman:
P.M. Skarstad
- Thursday PM
- EM-16 Kenneth D.M. Harris, Michael D. Rogers and Colin A. Vincent, A Comparison Between 'Mixed Phase Electrode' and Percolation Models for Composite Electrodes in Solid State Cells
- EM-17 C.A.C. Sequeira, Cu Diffusion Coefficient in V₆O₁₃-Based Composite Electrodes Determined by a Galvanostatic Pulsed Relaxation Technique
- EM-18 C.J. Chen and M. Greenblatt, Lithium Insertion into Iron Spinels
- EM-19 R.J. Cava, A. Santoro, D.W. Murphy and R.S. Roth, The Crystal Structure of Lithium Inserted Metal Oxides: LiV₂O₅
- EM-20 Torben O. Brun, Sherman Susman, Jens-Erik Jorgensen, John Faber, Jr. and Kenneth J. Volin, Disorder and Transport in Beta-Lithium/Aluminum
- EM-21 E. Hatzikraniotis, J. Julien and M. Balkanski, Electrical and Optical Properties of Lithium Intercalated III - VI Compounds.
- EM-22 L.D. Yushina and V.I. Terekhov, Electrode Materials on the Base of Cuprous Chalcogenides.
- EM-23 Wang Nanmeng, Oxygen Diffusivity in Mo-MoO₂ Reference Electrode of Oxygen Probe from Electrochemical Measurements.

- SESSION 7-C**
EXPERIMENTAL TECHNIQUES
- Chairman:
D.F. Shriver
- Thursday PM
- ET-9 J. Shinar, D.S. Tannhauser, and B.L. Silver, ERS Study of Color Centers in Yttria Stabilized Zirconia
- ET-10 S. Suzuki, M. Ishigame and M. Tanaka, Structural Studies of ZrO₂-Y₂O₃ System by Electron Diffraction and Electron Microscopy
- ET-11 Paul Heitjans, Beta-NMR Studies of Ionic Motions in Layered and Glassy Compounds
- ET-12 M. Ouwkerk, N.H. Andersen, F.F. Veldkamp and J. Schoonman, Neutron Diffraction and TSDC on Ba_{1-x}U_xF_{2+2x} Solid Electrolytes
- ET-13 E. Lukacevic, A. Santoro and R.S. Roth, Neutron Powder Diffraction Study of the Structure of the Compound Li_{0.31}La_{0.56}MoO₄
- ET-14 G. Dalba, A. Fontana, P. Fornasini and F. Rocca, Structural Study of AgI:Ag₂O:Bi₂O₃ Glasses by EXAFS Spectroscopy
- ET-15 Kuo Chu-kun and Li Xiang-ting, Investigation on Ion Transport in Solids Using Electron Microprobe

Friday PM

SESSION 7-D
FLUORIDE CONDUCTORS

Chairman:
P. Bro

Yoshiaki Ito, Kichiro Koto, Shinzo Yoshikado and Tadashi Ohachi, Anion Disorder and its Resulting Ionic Conductivity of Beta-Pb_{1-x}Bi_xF_{2+x} (x ≤ 0.30) and Beta-Pb_{1-x}Y_xF_{2+x} (x ≤ 0.20) Single Crystals

C.R.A. Catlow, A.V. Chadwick, G.N. Greaves and L.M. Moroney, An EXAFS Study of ABF₄ Fluorite-Related Anion Conductors

K. Narasimha Reddy, Conductivity of Gd-Doped NaYF₄

Masahiro Yoshimura, Revised Subsolidus Phase Diagram of the system SrF₂-LaF₃ - POSTER ONLY

OTHER APPLICATIONS

S-K. Joo, I.D. Raistrick and R.A. Huggins, The Electrochemical Insertion of Lithium into Bleached Potassium Hexatungstate Thin Films: A New Electrochromic Material

A.R. Lasis, E.V. Pentyush, V.V. Bets, J.A. Benders and G.E. Bajars, Solid Electrochromic System Based on Tungsten Oxide and Nickel Hydroxide

Xue Rong-jian and Chen Li-quan, Electrical Double Layer Capacitor by Using Beta"-Al₂O₃ Containing Fine Carbon Particles as Electrolytes

Wang Shu Yun, A New High Performance Potential Memory Device

Friday AM

SESSION 8-A
THEORY

Chairman:
R. Frech

29 J.C. Wang and J.B. Bates, Model for the Interfacial Impedance Between a Solid Electrolyte and a Metal Electrode

30 R. Kutner and H. van Beijeren, Tracer Diffusion in a One-Dimensional Lattice Gas in the Presence of a Drift Force

31 B. Sapoval, M. Rosso and J.F. Gouyet, Simulation of Fractal Objects Obtained by Intercalation in Layered Compounds

32 T. Gobron and J.F. Gouyet, Underdamped Systems and Lattice Gas Models

33 Kuo Chu-kun and Yan Yi-min, Simulation of the Intergranular Impedance of Sodium Ion Conductive Ceramics

34 R. Blender and W. Dieterich, Interface Resistance in a Hopping Model POSTER ONLY

35 Irina M. Curelaru and Eero Suominen, Localization versus Delocalization of Orbitals in the Quasi-One Dimensional Conductor Na_{0.33}V₂O₅ POSTER ONLY

Friday AM

SESSION 8-B
GLASSES

Chairman:
M.D. Ingram

2 H.G.K. Sundar and C.A. Angell, Fast Halide Ion Conducting Lead Metaphosphate Glasses - A Failed Divalent Cation Conductor

3 A. Pechenik, D.W. Whitmore, M.A. Ratner and S. Susman, Ionic Conductivity, Raman and IR Spectra of LiAlSiO₄ Glass

4 Changle Liu and C.A. Angell, All-Halide Superionic Glasses

5 G. Carini, M. Cutroni, M. Federico and G. Tripodo, Anelastic Relaxations in AgI-Doped Borophosphate Glasses

6 A. Kone and J.L. Souquet, Thermodynamic Approach to Ionic Conductivity Enhancement by Dissolving Halide Salts in Inorganic Glasses

9 Steve W. Martin, Relationship Between Alkali Ion Concentration and Apparent Glass Basicity: Conductivity Maximum in Glass.

8 Yu. G. Vlasov, E.A. Bychkov and B.L. Seleznev, Ionic Conductivity Oscillations in Silver-Arsenic-Selenium-Tellurium Chalcogenide Glasses

- SESSION 8-C**
OTHER CONDUCTORS
- Chairman:
B.B. Owens
- Friday AM
- OC-1 Joachim Maier, On the Heterogeneous Doping of Ion Conductors
- OC-2 C.S. Sunandana, Synthesis of and Transport in $\text{LiF}_3 \cdot \text{O}^{2-} \cdot \text{Li}_2\text{SO}_4$
- OC-3 Satoru Fujitsu, Kunihito Koumoto and Hiroaki Yanagida, Enhancement of Ionic Conductivity of SrCl_2 by Al_2O_3 Dispersion
- OC-4 J.J. Didisheim, R.K. McMullan and B.J. Wuenesch, Neutron Diffraction Study of the Distribution and Thermal Motion of Silver Ions in Alpha- and Beta- Ag_3Si
- OC-5 Li Wei Zhang, M. Yahag and K.S. Goto, Vapor Species of Fused $\text{Li}_2\text{O}-\text{B}_2\text{O}_3$, $\text{Na}_2\text{O}-\text{SiO}_2$ and $\text{Na}_2\text{O}-\text{P}_2\text{O}_5$ systems for thin film manufacturing by PVD
- OC-6 Erik Krogh Anderson, Inger Grete Krogh Anderson and Eivind Skou, Proton Conduction in Ammonium Zeolites. Effects of Deammoniation and Thermal Treatment
- OC-7 Yu Wen-hai and Zheng Qing, Study on the Physical Properties of an Amorphous Ag FIC at Low Temperature

- SESSION 8-D**
SENSORS
- Chairman:
M.S. Whittington
- Friday AM
- S-1 W. Sitte, I. Begsteiger and H.P. Fritzer, Investigation of the Tellurium-Rich Part of the Ternary System Ag-Nb-Te Using a Solid Silver Electrolyte
- S-2 H. Hoetzel and W. Weppner, Application of Fast Ionic Conductors in Solid State Galvanic Cells for Gas Sensors
- S-3 M. Goge, K. Heggestad and M. Goulet, Electrochemical Behavior of Stabilized Zirconia Using Thick Films Technology
- S-4 Tung Ting, Wei Shoukun, Zang Shengbi and Hu Mingfu, A Study on the Effect of Silicon Upon the Activity Coefficient of Niobium in Liquid Iron with the Solid Electrolyte Oxygen Cell Technique
- S-5 Yu. G. Vlasov and E.A. Bychkov, Ion-Selective Electrochemical Sensors Based on Ion-Conducting Chalcogenide Glasses

- SESSION 9-A**
POLYMERS
- Chairman:
L.C. De Jongh
- Friday AM
- P-15 H. Cheradame, A. Gandini, J.P. Le Nest, Correlation Between Structure and Transport Properties in Ion Containing Networks
- P-16 M.C. Wintersgill, J.J. Fontanella, J.P. Calame, M.K. Saha, S.G. Greenbaum, and C.G. Andeen, Conductivity, DR, DSC, NMR Studies of Poly(Vinyl Acetate) Complexed with Alkali Metal Salts
- P-17 O. Inganäs and T.A. Skotheim, Polymer Solid Electrolyte Photoelectrochemical Cells with n-Si Polypyrrole Photoelectrodes
- P-18 Masayoshi Watanabe, Satoshi Nagano, Kohei Sanui and Naoki Ogata, Ion Conduction Mechanism in Network Polymers of Poly(propylene Oxide) Containing lithium Perchlorate.
- P-19 B. Scrosati and M. Lazzari, The Kinetics of the Electrochemical Doping Processes of Polyacetylene

- SESSION 9-B**
OTHER CONDUCTORS
- Chairman:
J.B. Boyce
- day AM
- 8 M. Lumbreras, J. Protas, S. Jebbari, G.J. Dirksen, and J. Schoonman, Structure and Ionic Conductivity of Mixed Lead Halides $PbCl_{2x}Br_{2(1-x)}$
- 9 R.J. Cava, N. Hessel Andersen, K. Clausen, E.A. Rietman, and J.K. Kjems, Diffuse Neutron Scattering Study of Antifluorite Type $Cu_{2-x}Se$
- 10 H. Huber, M. Mali, J. Roos and D. Brinkmann, Diffusion and Pressure Effects in the Superionic Conductor Ag_3SBr Studied by NMR
- 11 Manfred Betsch, Hans Rickert and Rainer Wagner, Investigations of the Forces of Inertia of the Mobile Ions in Solid Ionic Conductors - Measurements on $RbAg_4I_5$
- 12 Chen Li-quan, Zhao Zong-yuan and Dai Sou-yu, Bulk Interaction Between AgI and $\alpha-Fe_2O_3$ in their Composite Electrolyte

- SESSION 9-C**
ALKALI CONDUCTORS
- Chairman:
R.A. Huggins
- day AM
- 22 M. El-Gemal and R. Dupree, An NMR Study of $Li_2Ti_3O_7$
- 23 H. Hamdoun, D. Tran Qui and E.J.L. Schouler, Ionic Conductivity and Crystal Structure of $Li_{(1-x)}Ti_{(2-x)}In_xP_3O_{12}$

GLASSES

- 9 Steve W. Martin, Relationship Between Alkali Ion Concentration and Apparent Glass Basicity: Conductivity Maximum in Glass
- 0 M. Grayson Alexander and Brian Riley, Ion Conducting Glasses in the $Na_2O-Y_2O_3-SiO_2$ and $Li_2O-Y_2O_3-SiO_2$ Systems.
- 1 Steve W. Martin, Interrelation Between the Glass Transition and Ionic Conductivity

uesday, August 21

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|-------------|--|
| 9:00-10:24 | Contributed Session 4 |
| Auditorium | 4-A Theory (TH-15 - TH-21) |
| Blue Room | 4-B Proton Conductors (PC-1 - PC-7) |
| Red Room | 4-C Polymers (P-8 - P-14) |
| Green Room | 4-D Interfacial Effects (I-1 - I-7) |
| 10:25-11:25 | Refreshments, Posters for Session 4, A-D |
| 11:25-12:25 | Plenary Session D |
| | D-1 B. Dunn |
| | D-2 I.D. Raistrick |
| 12:30-1:15 | Lunch at Truckee High School |
| 1:20-3:00 | Contributed Session 5 |
| Green Room | 5-A Batteries (B-1 - B-8) |
| Blue Room | 5-B Oxide Conductors (O-9 - O-16) |
| Red Room | 5-C Electrode Materials (EM-9 - EM-16) |
| Auditorium | 5-D Beta Alumina (BA-9 - BA-16) |
| 3:00-4:00 | Refreshments, Posters for Session 5, A-D |
| 4:00-5:00 | Plenary Session E |
| | E-1 P. Heitjans |
| | E-2 S. Liu |

For Reference

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