ALBERT DANON

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CURRICULUM VITAE

Date and Place of Birth	: 1960 Turkey
Immigration to Israel	: 1970
I.D.F (Israeli Defence Force)	: 1978-1981
Marial Status	: Married, 3 children
Email	: Albdanon@yahoo.com

EDUCATION

Period	Name of School	Subject	Degree	Date of Award
1986-1992	Tel-Aviv University	Chemistry	Ph.D. (with distinction)	1992
1984-1986	Tel-Aviv University	Chemistry	M.Sc	1986
1881-1984	Tel-Aviv University	Chemistry	B.Sc	1984

Title of M.Sc Thesis: Dissociation and Energy Transfer in Molecule-Surface collisions.
M.Sc. Thesis Adviser: Prof. Aviv Amirav

Title of Ph.D. Dissertation: Molecular Ionization at Hyperthermal Surface Scattering.
Ph.D. Thesis Adviser: Prof. Aviv Amirav

PROFESSIONAL EXPERIENCE

Period	Name and Adress of Institution	Department	Function
1992-2013	Nuclear Research Center Negev P.O. Box 9001 Beer Sheva Israel	Chemistry	Principal Investigator

PROFESSIONAL and ADMINISTRATIVE POSITIONS in NRCN

2010- 2013	Researcher, Chemistry Department
2003-2011	Head of Chemical Physics Laboratory Chemistry Department NRCN.
2002-2003	Head of Gas Analysis Section, Analytical Chemistry Laboratory NRCN.
2000-2003	Head of Mass Spectrometry Section, Analytical Chemistry Laboratory NRCN.
1995- 2000	Head of Gas-Solid Section, Chemical Physics Laboratory, NRCN.
1994-1999	Quality Assurance Manager, Chemistry Department, NRCN.

RESEARCH INTERESTS

- Mass Spectrometry with supersonic molecular beams.
- Atmospheric Pressure Temperature Programmed Desorption Mass Spectrometry.
- Gas-Surface interaction, sorption, encapsulation, surface ionization, hyperthermal surface Ionization.
- Gas-Chromatography, Gas Chromatography-Mass spectrometry
- Solid state oxygen isotope exchange

UNDERGRADUATE STUDENTS SUPERVISED

- Supervision for M.SC. Degree- Ifat Avraham, Chemical Engineering Department, Ben-Gurion University of the Negev. Thesis title" Study of Carbon Molecular Sieve Fibers by a Nobel Temperature Programmed Desorption System" 1998.
- Supervision for M.SC. Degree- Avraham Saig, Chemistry Department, Ben-Gurion University of the Negev. Thesis title "Investigation of Neon and Helium Interaction with Microporous Materials" 2005.

- Supervision for M.SC. Degree- Liron Hevrony, Chemistry Department, Ben-Gurion University of the Negev. Thesis title "Oxygen Exchange in Sulfate and Selenate Hydrate Salts" 2009.

LIST OF PUBLICATIONS

Articles

1. A. Danon and A. Amirav
   Kinetic Energy Induced Dissociative Ionization.
   J. Chem. Phys. 86, 4708-4709 (1987)
2. A. Danon and A. Amirav
   Ceramic Nozzle for Molecular Acceleration and its Temperature Measurement.
   Rev. Sci. Instrum. 58, 1724-1726 (1987)
3. A. Danon, E. Kolodney and A. Amirav
   Disssociation and Ionization in Hyperthermal 1-Iodopropane - Diamond Scattering.
   Surface Science 193, 132-152 (1988)
4. A. Danon, A. Amirav, J. Silberstein, I. Salman and R.D. Levine
   Internal Energy Effects on Mass Spectrometric Fragmentation.
   J. Phys. Chem. 93, 49-55 (1989)
5. A. Danon and A. Amirav
   Surface-Molecule-Electron Transfer : I_2 / Diamond Scattering at 1-12 eV.
   Phys. Rev. Lett. 61, 2961-2964 (1988)
6. A. Danon and A. Amirav
   Molecular Ionization and Dissociative Ionization at Hyperthermal Surface Scattering.
   J. Phys. Chem. 93, 5549-5562 (1989)
7. A. Danon and A. Amirav
   Hyperthermal Surface Ionization.
   Israel J. Chem. 29, 443-449 (1990)
8. A. Danon and A. Amirav
   Electron Impact Mass Spectrometry in Supersonic Molecular Beams.
   Int. J. Mass Spectrom and Ion Proc. 97, 107-113 (1990)
9. A. Danon and A. Amirav
   Hyperthermal Surface Ionization - A Novel Ion Source with Analytical Applications.
   Int. J. Mass Spectrom and Ion Proc. 96, 139-167 (1990)
10. A. Danon and A. Amirav
    Chemically Induced Hyperthermal Surface Ionization.

J. Chem. Phys. 92, 6968- 6970 (1990)

11. A. Danon A. Vardi and A. Amirav
Hyperthermal Surface Ionization of Mercury on Pt(111).
Phys. Rev. Lett. 65, 2038-2041 (1990)

12. E. Kuipers, A. Vardi, A. Danon and A. Amirav
Surface- Molecule Proton Transfer- A Demonstration of the Eley Rideal Mechanism.
Phys. Rev. Lett. 66, 116-119 (1991)
13. A. Danon, A. Vardi and A. Amirav
The Formation of NaXe and KXe Ions at Hyperthermal Xe-Pt(111) Scattering.
J. Chem. Phys. 93, 7506- 7507 (1990)
14. E. Kuipers, A. Vardi A. Danon and A. Amirav
Surface-Molecule Proton Transfer in the Scattering of Hyperthermal DABCO from H/Pt(111).
Surf. Sci. 261, 299-312 (1992)
15. S. Dagan, A. Danon and A. Amirav
Collision Activated Dissociation in the Hyperthermal Surface Ionization Mass Spectrometry of Cholesterol.
Int. J. Mass Spectrom and Ion Proc. 113, 157-165 (1992)
16. A. Penner, A. Danon, E.W. Kuipers, S. Dagan, R. Berson and A. Amirav
Selective Reactions of Metal Activated Molecules.
Proceedings of the symposium book on " Stereoselective Reactions of Metal-Activated Molecules" by Vieweg-Verlag Berlin 1991 p. 105-117.
17. A. Danon and A. Amirav
Isotope, Molecular and Surface Effects on Hyperthermal Surface Induced Dissociative Ionization
Int. J. Mass Spectrom & Ion Proc. 125, 63- 74 (1993)
18. A. Danon, I. Avraham, J.E. Koresh
Temperature Programmed Desorption – Mass Spectrometer with Supersonic Molecular Beam Inlet System.
Rev. Sci. Instrum. 68, 4359-4363, (1997)
19. I. Avraham, A. Danon and J.E. Koresh
Study of Carbon Molecular Sieve Fibers by Atmospheric TPD-MS of H_2O, CO and CO_2.
J. Chem. Soc. Faraday Trans. 94, 1869-1874 (1998)
20. L.P. Martin, J.C. Poret, A. Danon, M. Rosen
Effect of Adsorbed Water on the Ultrasonic Velocity in Alumina Powder Compacts.
Mater. Sci. Eng. A 252, 27-35 (1998)
21. I. Avraham, A. Danon and J.E. Koresh
Water Coadsorption Effect on the Physical Adsorption Of N_2 and O_2 at Room Temperature on Carbon Molecular Sieve Fibers.
Phys. Chem. Chem. Phys. 1, 479-484 (1999)
22. A. Danon, J.E. Koresh and M.H. Mintz

Temperature Programmed Desorption Characterization of Oxidized Uranium Surfaces: relation to Some Gas-Uranium Reactions.
Langmuir 15, 5913-5920 (1999)
23. A. Rubinstein, R. Shneck, A. Danon, J. Hayon, S. Nathan, A. Raveh
Surface Treatment of Tantalum to Improve its Corrosion Resistance.
Mater. Sci. Eng. A 302, 128-134 (2001)
24. J.E. Koresh and A. Danon
A Novel Insight on the High-Temperature Helium Interaction with Carbon Molecular Sieve.
Langmuir 17, 2739-2742 (2001)
25. A. Raveh, A. Danon, J. Hayon, A. Rubinstein, R. Shneck, J.E. Klemberg-Sapieha, L. Martinu
Characterization of Carburized Tantalum Layers Prepared in Inductive RF Plasma.
Thin Solid Films 392, 56-64 (2001)
26. A. Amirav, S. Dagan, A. Danon, T. Shahar, S.B. Wainhaus, N. Tzanani, A. Gordin, M. kochman, O. Granot
Mass Spectrometry with Supersonic Molecular Beams – Supersonic GC-MS and Supersonic LC-MS.
Tel-Aviv University press 2001
27. A. Danon, Y. Finkelstein and J. E. Koresh
Sieving effect of Neon and Helium at High Temperature on Carbon Molecular Sieve fibers.
Langmuir 18, 638-641 (2002)
28. A. J. Groszek, I. Abraham, A. Danon and J.E. Koresh
Interaction of O_2, N_2 and He at Room Temperature with Carbon Molecular Sieves Sensed by Adsorption measurements.
Colloids and Surfaces A 208, 65-70 (2002)
29. A. Saig, A. Danon, Y. Finkelstein and J.E. Koresh
A Continuous polymorphic transition of coordinating water molecules in $CuSO_4 \cdot 5H_2O$.
J. Phys. Chem of Solids 64, 701-706 (2003)
30. A. Saig, A. Danon, Y. Finkelstein, and J.E. Koresh
Selective and Reversible Entrapment of He and Ne in NaA Zeolite at Atmospheric Pressure.
J. of Chem. Phys. 118, 4221-4225 (2003)
31. Y. Finkelstein, A, Saig, A. Danon and J.E. Koresh
Study of Type-A Zeolite. Part 1: Mechanism of He and Ne Encapsulation
J. Phys. Chem. B 107, 9170-9174 (2003)
32. Y. Finkelstein, A, Saig, A. Danon and J.E. Koresh
Encapsulation of He and Ne in Carrbon Molecular Sieves
Langmuir 19, 218-219 (2003)
33. Y. Finkelstein, A, Saig, A. Danon and J.E. Koresh
Study of Type-A Zeolite. Part 2: Effect of Dehydration on the Effective Aperture. J. Phys. Chem. B 107, 13414-13418 (2003).
34. A. Danon, A. Saig, Y. Finkekstein, J.E. Koresh

A New Route of Oxygen Isotope Exchange in the Solid Phase: Demonstration in $CuSO_4 \cdot 5H_2O$
J. Phys. Chem. B 109, 21197-21201 (2005)

35. L. Hevroni, Z. Shamish and Albert Danon
Thermal dehydration and decomposition of copper selenate pentahydrate
J. Therm. Ana. and Calor. 98, 367-369 (2009)

36. G.Benamar , D. Schweke, N. Shamir, S. Zalkind, T. Livneh, A. Danon, H.M. Mintz , G. Kimmel,
Heat pretreatment - induced activation of gadolinium surfaces towards the initial precipitation of hydrides.
Journal of Alloys and Compounds, 498, 26-29 (2010).

37. L Hevroni and A. Danon
Oxygen isotope exchange during thermal dehydration of copper selenate pentahydrate.
Solid State Ionics 181, 1565-1567 (2010).

38. S. Attia, L. Hevroni, A. Danon, D. Meyerstein, J.E. Koresh and Y. Finkelstein
"The role of the Cation in the Oxygen Isotopic Exchange in Crystalline Sulfate Salt Hydrates"
Adsorption,19, 821 (2013).

Patents

1. A. Amirav and A. Danon
"A Method and Apparatus for Producing Ions by Surface Ionization of Energy-Rich Molecules and Atoms." Israeli Patent No 81375 field 23.1.87 (accepted 1992).
USA Patent No 48453676 accepted July 4 1989.
Great Britain Patent No 2203887 issued 1991

2. A. Amirav and A. Danon
Mass Spectrometer Method and Apparatus for Analyzing Materials.
USA Patent No 5055677 1991. Israel Patent Application No 90970/2 field 1989, Great Britain, France, Italy and West Germany Patent No 0408475 issued 1995.