

RESUME**BENVENISTE NATAN**

Birth: 1954, Greece
 Nationality: Israeli
 Business Address: Faculty of Aerospace Engineering
 Technion - Israel Institute of Technology, Haifa 32000, Israel
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ACADEMIC DEGREES:

B.Sc. 1977, Dept. of Aeronautical Engineering,
 Technion - Israel Institute of Technology, Haifa, Israel.
 M.Sc. 1982, Dept. of Aeronautical Engineering,
 Technion - Israel Institute of Technology, Haifa, Israel.
 D.Sc. 1988, Faculty of Aerospace Engineering
 Technion - Israel Institute of Technology, Haifa, Israel.

ACADEMIC APPOINTMENTS:

Aug. 2013 - present	Professor Faculty of Aerospace Engineering, Technion-I.I.T., Haifa, Israel
Sept. 2013 – Feb. 2014	Visiting Professor Dept. of Aerospace Technology and Science Politecnico di Milano, Milan, Italy
Aug. 2001 – July 2013	Associate Professor Faculty of Aerospace Engineering, Technion-I.I.T., Haifa, Israel
Aug. 2003 – Feb. 2004	Visiting Professor Dept. of Mechanical Engineering National Technical University of Athens, Athens, Greece
March 1996- Aug. 2001	Senior Lecturer Faculty of Aerospace Engineering, Technion-I.I.T., Haifa, Israel
Oct. 1991-Feb. 1996	Research and Teaching Associate Faculty of Aerospace Engineering, Technion-I.I.T., Haifa, Israel
Sept. 1989 - Sept. 1991	National Research Council (NRC) Research Associate Dept. of Aeronautics & Astronautics Naval Postgraduate School, Monterey, CA., USA
Oct. 1988 - Aug. 1989	Research Associate & Combustion Laboratory Supervisor Faculty of Aerospace Engineering, Technion-I.I.T., Haifa, Israel
March 1983 - Oct. 1988	Instructor Faculty of Aerospace Engineering, Technion-I.I.T., Haifa, Israel
Oct. 1977 - Sept. 1980	Teaching Assistant Faculty of Aerospace Engineering, Technion-I.I.T., Haifa, Israel

RESEARCH INTERESTS:

Propulsion and Combustion and related areas, including:

Gel Propellants (rheology, flow, atomization and combustion) for Rocket and Ramjet Engines; Hydrogen Peroxide applications; Hybrid Rockets; Boron Combustion, Combustion of Metals; Solid Fuel Ramjet Engines, Solid Fuel Supersonic Combustion Ramjet (Scramjet) Engines; Two-phase, Turbulent, Reactive Flows; Combustion Instability; Thermodynamics.

TEACHING EXPERIENCE:

A. ACADEMIC

I. Faculty of Aerospace Engineering, Technion-I.I.T., Haifa, Israel.

Courses taught: Rocket and Jet Propulsion (Graduate)
Ramjet Engines (Graduate and Undergraduate)
Thermodynamics (Undergraduate)
Rocket Propulsion (Undergraduate)
Solid Propellant Rocket Propulsion (Undergraduate)
Propulsion Laboratory (Undergraduate)
Engineering Laboratory (Undergraduate)
Propulsion Seminar (Undergraduate)

2009 - Developed and taught a Graduate and Undergraduate course: "Gel Propulsion"

II. Dept. of Mechanical Engineering, National Technical University of Athens, Greece, 2003.

Courses taught: Missile Propulsion (Graduate and Undergraduate)

III. Dept. Aerospace of Science and Technology, Politecnico di Milano, Italy, 2013.

Courses taught: Space Propulsion and Power Systems (Graduate and Undergraduate)

B. PRE- ACADEMIC

IV. The Zalman Aran General High School, **Beit-Shean**, Israel, 1980-1982.

Courses taught: High School Mathematics
High School Physics

V. Academic Preparatory School, Technion, Israel, 1980.

Courses taught: Mathematics

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

1. The American Institute of Aeronautics and Astronautics (AIAA), **Associate Fellow**.
2. The Combustion Institute, **Member**.
3. The Institute of Liquid Atomization and Spray Systems (ILASS), Israeli Branch, **Member**.
4. Israeli Society of Aeronautics and Astronautics, **Member**.

PUBLIC PROFESSIONAL ACTIVITIES:

EDITORIAL BOARD

2009-present **Associate Editor**
International Journal of Energetic Materials and Chemical Propulsion.

COMMITTEES

2006-present Propulsion Physics Technical Committee - EUCASS.

2000-present Hybrid Rockets Technical Committee – AIAA.

REVIEWER FOR:

Aerospace Science and Technology;
Aircraft Engineering and Aerospace Technology;
AIAA Journal of Propulsion and Power;
Atomization and Sprays;
Combustion and Flame;
International Journal of Energetic Materials and Chemical Propulsion;
Journal of Rheology;
Fuel;
Fuel Processing Technology;
Propulsion Physics.

OTHER COMMITTEES

2010-2011 Chair, Papers Committee, 51st Israel Annual Conference on Aerospace Sciences.

1999-present Member in the Steering Committee for the Education of Field Engineers in Aeronautical Engineering, Israeli Ministry of Education.

1995-present Head/Member of five Committees for Preparation of Examinations of Field Engineers in Aeronautical and Mechanical Engineering, Israeli Ministry of Education.

TECHNION ACTIVITIES:

- Jan. 2013 - present Technion Graduate Energy Program Committee, Member.
- Sept. 2012 - present Representative in the National Field Engineers School Assembly
- Jan. 2012 - present Technion Faculty-Student Committee, Member.
- June 2008 - present Continuous participation in ATS fund-raising activities
(Jan. 2012, Aug. 2010, Nov. 2009, May 2009, Sep. 2008, June 2008).
- Oct. 2008 - July 2009 Technion Energy Committee, Member.
- Apr. 2004 - present Continuous participation in the Hellenic Technion Society activities.
- Oct. 2003 - Mar. 2004 Founder of the **Hellenic Technion Society** (HTS) in Greece and coordinator of the initial fund-raising.

DEPARTMENTAL ACTIVITIES:

Jan. 2014 - present	Member of the Committee for Advanced Studies
Jan. 2006 - Dec. 2013	Member of the Committee for Undergraduate Studies Programs
Mar. 2011 - Dec. 2012	Deputy Dean for Undergraduate Studies
Jan. 2010 - Dec. 2012	Undergraduate Studies Coordinator
Jan. 2010 - Dec. 2012	Chair of the Student-Faculty Committee
Jan. 1994 - Dec. 2009	In charge of the Promotion of the Aerospace Sciences in the Youth
Jan. 2006 - Dec. 2007	Undergraduate Studies Coordinator
Jan. 2006 - Dec. 2007	Chair of the Student-Faculty Committee
Mar. 2004 - Dec. 2005	Faculty Visits Coordinator
Nov. 2000 - Sep. 2003	Undergraduate Studies Coordinator
Nov. 2000 - Sep. 2003	Chair of the Student-Faculty Committee
Jan. 1998 - Nov. 2000	In charge of the Monday-noon Industry Lectures.
Jan. 1998 - Dec. 1998	Active Undergraduate Studies Coordinator

HONORS:

Outstanding Lecturer Award, Semester 2, 2010/2011, Technion, Israel.

Outstanding Lecturer Award, Semester 1, 2008/2009, Technion, Israel.

Outstanding Lecturer Award, Semester 2, 2004/2005, Technion, Israel.

Outstanding Lecturer Award, Semester 1, 2004/2005, Technion, Israel.

Outstanding Lecturer Award, Semester 2, 2002/2003, Technion, Israel.

Outstanding Lecturer Award, Semester 2, 1999/2000, Technion, Israel.

Muriel and David Jacknow Award for Excellence in Teaching, Technion, Israel, 1996.

Outstanding Lecturer Award, Semester 2, 1994/1995, Technion, Israel.

Outstanding Lecturer Award, Semester 1, 1993/1994, Technion, Israel.

Outstanding Lecturer Award, Semester 1, 1991/1992, Technion, Israel.

US National Research Council Associateship Award, USA, 1989, 1990.

The David Ben-Gurion Foundation, Science Award, Israel, 1988.

Outstanding Instructor Award, Technion, Israel, 1987.

Excellent Achievements Award, Technion, Israel, 1984.

GRADUATE STUDENTS:

Completed Theses

- 1995 Halupovich Yulia**, Supervisor: B. Natan, Adtnl. Supervisor: Joseph Rom.
Thesis Subject: "Navier-Stokes Solution of Hypersonic Flow over a Backward Facing Step," (M.Sc.).
- 1995 Ben-Yakar Adela**, Supervisor: B. Natan, Adtnl. Supervisor: Alon Gany.
Thesis Subject: "Investigation of a Supersonic Combustion Solid Fuel Ramjet," (M.Sc.).
- 1997 Ben-Arosh Rachel**, Supervisor: Alon Gany, Adtnl. Supervisor: B. Natan.
Thesis Subject: "Theoretical Investigation of Supersonic Combustion of Solid Fuel in a Ramjet Engine," (D.Sc.).
- 1998 Cohen-Zur Abraham**, Supervisor: B. Natan.
Thesis Subject: "Experimental Investigation of the Supersonic Combustion of Solid Fuels in a Ramjet Engine," (M.Sc.).
- 1998 Markovetski Mark**, Supervisor: B. Natan.
Project Subject: "The Combustion of Aluminized Gel Fuels," (M.E.).
- 1999 Nachmoni Gad**, Supervisor: B. Natan.
Thesis Subject: "Experimental Investigation of the Combustion of Gel Propellants," (M.Sc.).
- 1999 Hashmonai Ben-Ami**, Supervisor: B. Natan.
Project Subject: "Theoretical Model for the Prediction of Solid Rocket Motor Igniter Performance," (M.E.).
- 2000 Rahimi Shai**, Supervisor: B. Natan.
Thesis Subject: "Investigation of the Injection Process of Gel Fuels," (M.Sc.).
- 2005 Shlomo Shitrit**, Supervisor: B. Natan, Adtnl. Supervisor: Joseph Ashkenazy.
Thesis Subject: "Experimental Investigation of a Conical Cross-Section Hall Thruster," (M.Sc.).
- 2005 Victor Chernov**, Supervisor: B. Natan.
Thesis Subject: "Pulsed Injection of Gel Propellants," (M.Sc.).
- 2005 Alina Kunin**, Supervisor: Barry Greenberg, Adtnl. Supervisor: B. Natan.
Thesis Subject: "Spray Characteristics of a Combusting, Organic-Gellant-Based Gel Fuel," (M.Sc.).
- 2007 Bar-or Dory**, Supervisor: B. Natan.
Thesis Subject: "Experimental Evaluation of Gel Fuel Droplet Burning Rates," (M.E.).
- 2008 Naama Lilach**, Supervisor: B. Natan.
Thesis Subject: "Feasibility Confirmation of Supersonic Combustion Ramjet," (M.E.).
- 2008 Anat Desyatkov**, Supervisor: B. Natan.
Thesis Subject: "Experimental Investigation of the Atomization and Combustion of Aluminized Gel Fuels," (M.Sc.).
- 2010 Victor Chernov**, Supervisor: B. Natan.
Thesis Subject: "The Rheological Properties of a Solid Particle Suspension in a Shear-thinning, Power-Law Fluid" (Ph.D.).
- 2011 Arza Haddad**, Supervisor: B. Natan, Adtnl. Supervisor: Rimon Arieli.
Thesis Subject: "The Ballistic Performance of a Boron containing Gel Fuel Ramjet," (M.Sc.).
- 2012 Igal Kronhaus**, Supervisor: B. Natan. Adtnl. Supervisors: Alexander Kapulkin, Moshe Guelman.
Thesis Subject: "Experimental and Numerical Investigations of Physical Processes in Co-Axial Magneto-Isolated Longitudinal Anode Type Hall Thruster," (Ph.D.).
- 2012 Evgeni Matzibeker**, Supervisor: B. Natan.
Thesis Subject: "Numerical Solution of the Flowfield in Gel Fuel Ramjet," (M.Sc.).

2013 Avraham Koifman, Supervisor: B. Natan.

Thesis Subject: "The Effect of Oxidizer Injection Method on Fuel Burning Rate in a Hybrid Rocket Motor," (M.E.).

2013 Mor Ben-Ephraim, Supervisor: B. Natan.

Thesis Subject: "Rheological Characterization of Hydrocarbon Silica-Gel Fuels," (M.E.).

Theses in Progress

Lior Miller, Supervisor: B. Natan (2013-present)

Thesis Subject: "Development of Integrated Geometry Nozzles for Rocket Motors," (M.Sc.).

Yair Solomon, Supervisor: B. Natan. (2013-present)

Thesis Subject: "Combustion of Pyrotechnic Mixtures based on Boron," (Ph.D.).

Arza Haddad, Supervisor: B. Natan. (2013- present)

Thesis Subject: "Combustion of Metalized Gel Fuel Droplets," (Ph.D.).

Hagit Fishman, Supervisor: B. Natan, Adtnl. Supervisor: Michael Shusser. (2012- present)

Thesis Subject: "The effect of energetic ingredients on the burning rate of solid propellants," (M.Sc.)

Vladimir Kurovsky, Supervisor: B. Natan, Adtnl. Supervisor: Shaul Gutman. (2012- present)

Thesis Subject: "Experimental and Theoretical Investigation of the Guidance System of an Exo-Atmospheric Kill Vehicle," (M.Sc.)

Gilad Gafni, Supervisor: B. Natan. (2011- present)

Thesis Subject: "Experimental Investigation of the Performance of a Metalized Gel Fuel Ramjet Combustor," (M.Sc.).

Avi Peker, Supervisor: B. Natan, Adtnl. Supervisor: Nathan Farber. (2009- present). Thesis

Subject: "Feasibility Study of a Medium/Long Range Ramjet Cruise Missile," (M.Sc.).

SUPERVISION OF STUDENTS FROM UNIVERSITIES ABROAD

Oct. 2004 - Sep. 2005 **Valeriano Perteghella**, Supervisor: B. Natan.

Thesis Subject: "Hydrogen Peroxide - Catalytic Decomposition and Hypergolic Ignition with Conventional Fuels," (Dipl. Ingegneria – Politecnico di Milano).

SUPERVISION OF POST-DOCTORAL FELLOWS:

March 2001 – July 2003 Dr. Rajesh Krishnan Kannalath

Sep. 2011 – present Dr. Soo-Jong Kim

April 2012 – April 2013 Dr. Jianxin Hu

COLLABORATION WITH NEW IMMIGRANT SCIENTISTS:

Apr. 2000 - present Alexander Kuznetsov

Feb. 2007 - Aug. 2008 Dr. Ilya Savotin

Sep. 2007 - Aug. 2011 Dr. Vladimir Marvin

Dec. 2008 - Nov. 2011 Dr. Liubov Marvina

RESEARCH GRANTS:

1.5.2012-30.4.2014	Ministry of Defense	\$270,000	B. Natan
	Subject: Metalized Gel Infrastructure		
15.7.2006-15.3.2012	Ministry of Defense	\$340,000	B. Natan
	Subject: Advanced Propulsion based on Boron/HC-Gel		
1.6.2006-29.2.2012	Ministry of Defense	\$240,000	B. Natan
	Subject: Metalized Gel Propellants		
1.1.2008-31.5.2012	Ministry of Defense	\$470,000	A.Gany, B. Natan, R. Arieli
	Subject: Supersonic Propulsion Infrastructure		
1.3.2008-31.8.2011	Ministry of Defense	\$170,000	B. Natan
	Subject: Metal Agglomeration in Hybrid Rockets		
1.3.2007-30.11.2011	Ministry of Defense	\$170,000	B. Natan
	Subject: Paraffin Fueled Hybrid Rockets		
1.1.2008-31.12.2010	Asher Space Institute	\$30,000	B. Natan
	Subject: Combustion of Gel Fuels for Space Engines		
1.5.2008-30.4.2009	Ministry of Defense	\$60,000	B. Natan
	Subject: Feasibility of a Supersonic Combustion Ramjet		
1.7.2003-31.3.2006	Ministry of Defense	\$66,000	B. Natan
	Subject: Boron Containing Gel Fuels for Ramjets		
10.2005	Ministry of Defense	\$50,000	B. Natan
	Equipment for the Subject: Boron Containing Gel Fuels for Ramjets		
1.3.05-31.12.05	Rosenthal Research Fund	\$5,000	B.Natan
	Subject: Combustion of Organic-Gellant-Based Gel Fuel Droplets		
1.7.2004-30.6.2006	Ministry of Defense	\$45,000	B. Natan
	Subject: Investigation of the Metal Agglomeration Process		
1.6.2000-31.5.2006	Ministry of Defense	\$330,000	B. Natan, A.Gany
	Subject: Metalized Gel Propellants		
2002-2003	Israel Science Foundation	\$20,000	A. Gany, B. Natan
	Purchase of Equipment – TGA/DSC		
1.1.2002-31.12.2002	Rafael	\$15,000	B. Natan
	Subject: Boron Containing Gel Propellants		
15.8.2000-14.8.2002	Ministry of Defense	\$100,000	B. Natan
	Subject: Hybrid Rocket Motor with Hydrogen Peroxide		
1.10.1996-31.12.2002	Rafael	\$215,000	B. Natan
	Subject: Gel Propellants		
1.1.2002-31.10.2003	Asher Space Institute	\$20,000	B. Natan
	Subject: Energy Aspects in Gel Propellant Rocket Motors for Space Applications		
1.4.1994-31.3.1998	Ministry of Defense	\$174,000	A. Gany, B. Natan
	Subject: Hypersonic Combustion of Solid Fuel		
1.8.1993-31.7.1996	Ministry of Science	\$67,000	A. Gany, B. Natan
	Subject: Dynamic Instability of Hybrid Rockets		
1.6.1994-30.6.1996	IAI - MALAM	\$36,000	B. Natan
	Subject: Combustion Instability in a Liquid Rocket Engine		

PUBLICATIONS

A. THESES:

1. "Thrust Modulation of Solid Propellant Rockets by means of a Fluidic Vortex Valve with Secondary Combustion," M.Sc. Thesis, Dept. of Aeronautical Engineering, Technion - Israel Institute of Technology, Haifa, Israel, July 1982.
2. "Experimental and Theoretical Investigation of the Internal Ballistics of Metallized Solid Fuel Ramjets," D.Sc. Thesis, Faculty of Aerospace Engineering, Technion - Israel Institute of Technology, Haifa, Israel, Oct. 1988, (in Hebrew).

B. REFEREED PAPERS IN PROFESSIONAL LITERATURE

a. Journals - published, in press or accepted papers:

1. Natan, B., Gany, A. and Wolff, H., "Thrust Modulation of Solid Propellant Rockets by a Fluidic Vortex Valve with Secondary Combustion," *Acta Astronautica*, Vol. 9, No. 12, pp. 703-711, 1982.
2. Natan, B. and Gany, A., "Ignition and Combustion of Boron Particles in the Flowfield of a Solid Fuel Ramjet," (*AIAA Journal of Propulsion and Power*, Vol. 7, No. 1, pp. 37-43, Jan.-Feb. 1991).
3. Natan, B. and Gany, A., "Effects of Bypass Air on Boron Combustion in Solid Fuel Ramjets," (*AIAA Journal of Propulsion and Power*, Vol. 9, No. 1, pp. 155-157, Jan.-Feb. 1993).
4. Natan, B. and Gany, A., "Combustion Characteristics of a Boron Fueled Ramjet with Aft-Burner," (*AIAA Journal of Propulsion and Power*, Vol. 9, No. 5, pp. 694-701, Sept.-Oct. 1993).
5. Nability, J.A., Lee, T.-H., Natan, B. and Netzer, D.W., "Combustion Behavior of Boron Carbide in Solid Fuel Ramjets," *International Journal of Energetic Materials and Chemical Propulsion*, Vol. 2, No. 1-6, pp. 287-302, 1993.
6. Natan, B. and Netzer, D.W., "Experimental Investigation of the Effect of Bypass Air on Boron Combustion in a Solid Fuel Ramjet," *International Journal of Energetic Materials and Chemical Propulsion*, Vol. 2, No. 1-6, pp. 427-437, 1993.
7. Rosenband, V., Natan, B. and Gany, A., "Ignition of Boron Particles Coated by a Thin Titanium Film," (*AIAA Journal of Propulsion and Power*, Vol. 11, No. 5, pp. 1125-1131, Nov.-Dec. 1995).
8. Natan, B. and Netzer, D.W., "Boron-Carbide Combustion in Solid Fuel Ramjets using Bypass Air. Part I: Experimental Investigation," *Propellants Explosives and Pyrotechnics*, Vol. 21, No. 6, pp. 289-294, Nov.-Dec. 1996.
9. Natan, B. and Netzer, D.W., "Boron-Carbide Combustion in Solid Fuel Ramjets using Bypass Air. Part II: Theoretical Investigation," *Propellants Explosives and Pyrotechnics*, Vol. 22, No. 1, pp. 6-10, Jan.-Feb. 1997.

10. Osherov, A., Natan, B. and Gany, A., "Analytical Modeling of the Gas Generator Frequency Response in Large Hybrid Rocket Boosters," *Acta Astronautica*, Vol. 39, No. 8, pp. 589-598, 1997.
11. Ben-Yakar, A., Natan, B. and Gany, A., "Investigation of a Solid Fuel Scramjet Combustor," *(AIAA) Journal of Propulsion and Power*, Vol. 14, No. 4, pp. 447-455, July-Aug. 1998.
12. Ben-Arosh, R., Natan, B., Spiegler, E. and Gany, A., "Fuel-Air Mixing In Solid Fuel Scramjet Combustors," *International Journal of Turbo and Jet Engines*, Vol. 15, No. 3, pp. 223-234, 1998.
13. Cohen-Zur, A. and Natan, B., "Experimental Investigation of a Supersonic Combustion Solid Fuel Ramjet," *(AIAA) Journal of Propulsion and Power*, Vol. 14, No. 6, pp. 880-889, Nov.-Dec. 1998.
14. Halupovich, Y., Natan, B., and Rom, J., "Numerical Solution of Turbulent Supersonic Flow over a Backward Facing Step," *Fluid Dynamics Research*, Vol. 24, No. 5, pp. 251-273, 1999.
15. Osherov, A. and Natan, B., "Combustion Instability in a Small Liquid Rocket Motor," *The Aeronautical Journal*, Vol. 103, No. 1023, pp. 245-252, 1999.
16. Ben-Arosh, R., Natan, B., Spiegler, E. and Gany, A., "Theoretical Study of a Solid Fuel Scramjet Combustor," *Acta Astronautica*, Vol. 45, No. 3, pp.155-166, 1999.
17. Rahimi, S. and Natan, B., "The Flow of Gel Fuels in Tapered Injectors," *(AIAA) Journal of Propulsion and Power*, Vol. 16, No. 3, pp. 458-471, May-June 2000.
18. Nachmoni, G. and Natan, B., "Combustion Characteristics of Gel Fuels," *Combustion Science and Technology*, Vol. 156, pp. 139-157, July 2000.
19. Rahimi, S. and Natan, B., "Numerical Solution of the Flow of Power-Law Gel Propellants in Converging Injectors," *Propellants Explosives and Pyrotechnics*, Vol. 25, No. 4, pp. 203-212, Aug. 2000.
20. Osherov, A. and Natan, B., "Investigation of the Starting Transient in a Gas-Generator Hybrid Rocket Motor," *Propellants Explosives and Pyrotechnics*, Vol. 25, No. 5, pp. 260-270, October 2000.
21. Rahimi, S. and Natan, B., "On the Thixotropic Effect of Inorganic Gel Fuels," *(AIAA) Journal of Propulsion and Power*, Vol. 16, No. 6, pp. 1182-1184, Nov.-Dec. 2000.
22. Natan, B. and Rahimi, S., "The Status of Gel Propellants in Year 2000," *International Journal of Energetic Materials and Chemical Propulsion*, Vol. 5, No. 1-6, pp. 172-194, 2002 (**Review Paper**).
23. Rahimi, S. and Natan, B., "Atomization of Gel Propellants through an Air-Blast Triplet Atomizer," *Journal of Atomization and Sprays*, Vol. 16, No. 4, pp. 379-400, June 2006.
24. Solomon, Y. and Natan, B., "Experimental Investigation of the Combustion of Organic-Gellant-Based Gel Fuel Droplets," *Combustion Science and Technology*, Vol. 178, No. 6, pp. 1185-1199, June 2006.

25. Rahimi, S., Peretz, A. and Natan, B., "Shear Rheometry of Gel Propellants," *Propellants Explosives and Pyrotechnics*, Vol. 32, No. 2, pp.165-174, April 2007.
26. Kunin, A., Greenberg, J.B. and Natan, B., "A Simple Phenomenological Model of an Organic Gel Spray Diffusion Flame," *Combustion Science and Technology*, Vol. 180, No. 1, pp. 27-44, Jan. 2008.
27. Chernov, V. and Natan, B., "The Effect of Periodic Disturbances on Non-Newtonian Fluid Sprays," *Journal of Atomization and Sprays*, Vol. 18, No. 8, pp. 723-738, June 2008.
28. Kunin, A., Greenberg, J.B. and Natan, B., "On the Behavior of Organic Gel Multisize-Spray Diffusion Flames," *Combustion Theory and Modelling*, Vol. 12, No. 5, pp. 983-987, October 2008.
29. Solomon, Y., Natan, B. and Cohen, Y., "Combustion of Gel Fuels based on Organic Gellants," *Combustion and Flame*, Vol. 156, No. 1, pp.261-268, 2009.
30. Kunin, A., Greenberg, J.B. and Natan, B., "Sensitivity of Pulsating Organic Gel Polydisperse-Spray Diffusion Flames to Evaporation Frequency Droplet-Size Dependency," *Journal of Atomization and Sprays*, Vol. 19, No. 6, pp. 583-595, 2009.
31. Rahimi, S., Peretz, A. and Natan, B., "Rheological Matching of Gel Propellants," (*AIAA*) *Journal of Propulsion and Power*, Vol. 26, No. 2, pp. 376-379, Mar.-Apr. 2010.
32. Marvin, V. and Natan, B., "The Effect of the Combined Burning Surface-Particle Motion on Aluminum Agglomeration," (*AIAA*) *Journal of Propulsion and Power*, Vol. 26, No. 2, pp. 379-381, Mar.-Apr. 2010.
33. Kunin, A., Natan, B. and Greenberg, J.B., "Theoretical Model of the Transient Combustion of Organic-Gellant-Based Gel Fuel Droplets," (*AIAA*) *Journal of Propulsion and Power*, Vol. 26, No. 4, pp. 765-771, July-Aug. 2010.
34. Natan, B., Perteghella, V. and Solomon, Y., "Hypergolic Ignition by Fuel Gelation and Suspension of Reactive or Catalyst Particles," (*AIAA*) *Journal of Propulsion and Power*, Vol. 27, No. 5, pp. 1145-1149, Sep.-Oct. 2011.
35. Desyatkov, A., Adler, G., Prokopov, O. and Natan, B., "Atomization of Gel Fuels using Impinging Jet Atomizers," *International Journal of Energetic Materials and Chemical Propulsion*, Vol. 10, No. 1, pp. 55-65, Oct. 2011.
36. Chernov, V. and Natan, B., "A Simplified Model for the Evaluation of the Rheological Properties of a Suspension of Solids in a Power-Law Fluid," *Applied Rheology*, Vol. 22, No. 1, 15163, pp. 1-10, Jan. 2012.
37. Kronhaus, I., Kapulkin, A., Balabanov, V., Rubanovich, M. Guelman, M. and Natan, B., "Investigation of Physical Processes in CAMILA Hall Thruster using Electrical Probes," *Journal of Physics, D. Applied Physics*, Vol. 45, No. 17 (175203-pp.12), May 2012.

38. Kronhaus, I., Kapulkin, A., Guelman, M. and Natan, B., "Investigation of Two Discharge Configurations in CAMILA Hall Thruster by PIC Method," *Plasma Sources Science and Technology*, Vol. 21, No. 3 (035005), June 2012.
39. Bar-or, D. and Natan, B., "The Effect of Ambient Conditions on the Burning Rate of Gel Fuel Droplets," *Propellants Explosives and Pyrotechnics*, Vol. 38, No. 2, pp.199-203, April 2013.
40. Chernov, V. and Natan, B., "Estimation of the Rheological Properties of a Suspension in a Gel Fluid," *AIAA Journal*, Vol. 51, No. 4, pp. 998-1003, April 2013.
41. Kronhaus, I., Kapulkin, Balabanov, V., Rubanovich, A., Guelman, M. and Natan, B., "Characterization of CAMILA Hall Thruster Discharge using Electrical Probe Measurements," (*AIAA Journal of Propulsion and Power*, Vol. 29, No. 5, pp. 938-949, July-Aug. 2013.
42. Hassid, S. and Natan, B., "Thermal Diffusion Controlled Ignition of Hypergolic Gel Propellants," (*AIAA Journal of Propulsion and Power*, Vol. 29, No. 6, pp. 1337-1342, Nov.-Dec. 2013.

b. Contributions in Edited Books:

43. Kunin, A., Natan, B. and Greenberg, J.B., "Modeling the Evaporation of Gel Fuel Droplets," in *Progress in Propulsion Physics*, Vol. 1, L. Deluca, C. Bonnal, O. Haidn and S. Frolov, editors, EUCASS Advances in Aerospace Sciences Book Series, Torus Press, pp. 263-274, 2009.
44. Haddad, A., Natan, B. and Arieli, R., "The Performance of a Boron Loaded Gel Fuel Ramjet," in *Progress in Propulsion Physics*, Vol. 2, L. Deluca, C. Bonnal, O. Haidn and S. Frolov, editors, EUCASS Advances in Aerospace Sciences Book Series, Torus Press, pp. 549-568, 2011.

C. PATENTS

45. 2010 - "Hypergolic Ignition of Oxidizers and Fuels by Fuel Gelation and Suspension of Reactive or Catalyst Particles," Israeli Patent Registration No. 199643 (with Yair Solomon and Valeriano Perteghella.)
46. 2009, "Method and System for Maneuvering Rockets," Israeli Patent Registration No. 198538, (with Shaul Gutman.)

D. REFEREED PUBLICATIONS IN CONFERENCE PROCEEDINGS:

1. Natan, B., Gany, A. and Wolff, H., "Thrust Modulation of Solid Propellant Rockets by a Fluidic Vortex Valve with Secondary Combustion," IAF 81-359 paper, Sep. 1981.
2. Natan, B. and Gany, A., "Optimal Fluidic Vortex Valve and Solid Propellant Combination for Variable Thrust Solid and Ducted Rockets," Collection of papers of the 24th Israel Annual Conference on Aviation and Astronautics, Israel, pp. 238-240, Feb. 1982.
3. Natan, B. and Gany, A., "Ignition and Combustion of Individual Boron Particles in the Flowfield of a Solid Fuel Ramjet," AIAA 87-2937 Paper, July 1987.

4. Natan, B. and Gany, A., "Effects of Bypass Air on the Combustion of Boron Particles in a Solid Fuel Ramjet," AIAA 89-2886 Paper, July 1989.
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12. Osherov, A., Natan, B. and Gany, A., "Investigation of the Hybrid Rocket Motor Starting Problem," Proceedings of the 36th Israel Annual Conference on Aerospace Sciences, Israel, pp. 417-430, Feb. 1996.
13. Rahimi, S. and Natan, B., "The Flow of Gel Fuels in Tapered Injectors," Proceedings of the 37th Israel Annual Conference on Aerospace Sciences, Feb. 1997, pp. 401-416.
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26. Kunin, A., Greenberg, J.B., and Natan, B., "A Simple Model of a Gel Spray Diffusion Flame," Paper 12-1, Proceedings of the 45th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 23-24, 2005.
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32. Solomon, Y., Natan, B. and Cohen, Y., "Combustion of Gel Fuels based on Organic Gellants," AIAA paper 2006-4565, July 2006.
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48. Marvin, V. and Natan, B. "The Effect of the Particle Motion on Aluminum Agglomeration in Solid Propellants," Paper 480, Proceedings of the 49th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, March 4-5, 2009.

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58. Kronhaus, I., Kapulkin, A., Natan, B. And Guelman, M., "CAMILA Hall Thruster Modeling Using A 2D PIC Simulation," Paper 649, Proceedings of the 51st Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 23-24, 2011.
59. Marvin, L., Marvin, V., and Natan, B., "Evaluation of the Mechanical Properties of a mixed HTPB-Paraffin Hybrid Rocket Fuel," Paper 705, Proceedings of the 51st Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 23-24, 2011.
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61. Kronhaus, I., Kapulkin, A., Guelman, M. and Natan, B., "Modeling Physical Processes in CAMILA Hall Thruster by PIC Method," IEPC-2011-043, Proceedings of the 32nd International Electric Propulsion Conference, Wiesbaden, Germany, September 11-15, 2011.
62. Kuznetsov, A., Solomon, Y., Gafni, G., Har-Lev, D. and Natan, B., "Development of a Lab-Scale Gel Fuel Ramjet Combustor," AIAA paper 2011-1506, Sep. 2011.

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64. Kronhaus, I., Kapulkin, Balabanov, V., Rubanovich, A., Guelman, M. and Natan, B., "Characterization of CAMILA Hall Thruster Discharge using Electrical Probe Measurements," AIAA paper 2012-4315, Aug. 2012.
65. Kim, S-J. and Natan, B., "Inlet Geometry Effects on the Flowfield of a Ducted Rocket Combustor," Paper 46, Proceedings of the 53rd Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, March 6-7, 2013.
66. Gafni, G., Kuznetsov, A., Har-Lev, D. and Natan, B., "Experimental Investigation of a Ramjet Combustor Using an Aluminized Hydrocarbon Gel Fuel," Paper 47, Proceedings of the 53rd Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, March 6-7, 2013.
67. Kim, S-J. and Natan, B., "Inlet Geometry Effects on the Internal Performance of a Variable Flow Ducted Rocket Combustor," AIAA paper 2013-3640, July 2013.
68. Gafni, G., Kuznetsov, A., Har-Lev, D. and Natan, B., "Experimental Investigation of a Ramjet Combustor Using an Aluminized Gel Fuel," AIAA paper 2013-3748, July 2013.
69. Matsibeker, E. and Natan, B., "Numerical Solution of the Flowfield in an Aluminized Gel Fuel Ramjet," AIAA paper 2013-3976, July 2013.

E. RESEARCH REPORTS:

1. Natan, B., Rosenband, V. and Gany, A., "Thermal Stress Model in a Multilayer Composite particle," TAE Report 696, Faculty of Aerospace Engineering, Technion, December 1993.
2. Rahimi, S. and Natan, B., "The Flow Behavior of Gel Propellants in Converging Injectors," TAE Report 770, Faculty of Aerospace Engineering, Technion, April 1996.

CONFERENCES:

Invited Plenary Lectures in International Conferences:

1. 5th International Symposium on Special Topics in Chemical Propulsion: Combustion of Energetic Materials, June 19-22, 2000, Stresa, Italy. Presentation topic: "The Status of Gel Propellants in Year 2000."
2. 8th International Symposium in Rocket Propulsion, June 16-20, 2002, Pozzuoli, Italy. Presentation topic: "Combustion Characteristics of Organic-Gellant-Based Gel Fuels."
3. 2010 Conference of the Korean Society of Propulsion Engineers, Nov. 25-26, 2010, Jeju, Korea. Presentation topic: "Advances in Gel Propulsion."

Invited Lectures in Israeli Conferences:

1. 14th Annual Symposium of the Israeli Section of the Combustion Institute, Haifa, Israel, Dec. 25, 1998. Presentation topic: "On Gel Propellants."

2. 24th Annual Symposium of the Israeli Section of the Combustion Institute, Haifa, Israel, Dec. 16, 2009. Presentation topic: "Combustion of Gel Propellants."

Contributed Talks:

1. The 1981 Israel Conference on Mechanical Engineering, Ben-Gurion Univ., Beer Sheba, Israel, June 15-16, 1981, Speaker: B. Natan. Presentation topic: "Injection of Reactive Swirling Flow for Thrust Modulation in Solid Propellant Rockets."
2. 32nd Congress of the International Astronautical Federation (IAF), Rome, Italy, Sept. 7-12, 1981, Speaker: B. Natan. Presentation topic: "Thrust Modulation of Solid Propellant Rockets by a Fluidic Vortex Valve with Secondary Combustion."
3. 24th Israel Annual Conference on Aviation and Astronautics, Tel Aviv and Haifa, Israel, February 17-18, 1982, Speaker: B. Natan. Presentation topic: "Optimal Fluidic Vortex Valve and Solid Propellant Combination for Variable Thrust Solid and Ducted Rockets."
4. 3rd Annual Symposium of the Israeli Section of the Combustion Institute, Haifa, Israel, May 1986, Speaker: B. Natan. Presentation topic: "Combustion Temperature Measurement by a Small Size Suction Pyrometer."
5. 29th Israel Annual Conference on Aviation and Astronautics, Tel Aviv and Haifa, Israel, Feb. 25-26, 1987, Speaker: B. Natan. Presentation topic: "Characteristic Behavior of a Boron Particle in the Flowfield of a Solid Fuel Ramjet Motor."
6. 23rd AIAA/ASEE/ASME/SAE Joint Propulsion Conference, San Diego, CA, USA, June 29-July 2, 1987, Speaker: A. Gany. Presentation topic: "Ignition and Combustion of Individual Boron Particles in the Flowfield of a Solid Fuel Ramjet."
7. 5th Annual Symposium of the Israeli Section of the Combustion Institute, Haifa, Israel, April 6, 1989, Speaker: B. Natan. Presentation topic: "Combustion of Boron in the Aft-Burner of a Solid Fuel Ramjet."
8. 25th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Monterey, CA, USA, July 11-13, 1989, Speaker: B. Natan. Presentation topic: "Effects of Bypass Air on the Combustion of Boron Particles in a Solid Fuel Ramjet."
9. 9th International Symposium on Air Breathing Engines (ISABE), Athens, Greece, Sept. 4-9, 1989, Speaker: B. Natan. Presentation topic: "Combustion Characteristics of a Boron Fueled Ramjet with Aft Burner."
10. 27th JANNAF Combustion Meeting, Cheyenne, Nov. 4-5, 1990, Speaker: D. W. Netzer. Presentation topic: "Combustion Behavior of Boron Carbide in Solid Fuel Ramjets."
11. 28th JANNAF Combustion Meeting, San Antonio TX, Oct. 28-Nov. 1, 1991, Speaker: D. W. Netzer. Presentation topic: "The Effects of Bypass Air on Boron Combustion in a Solid Fuel Ramjet."
12. 2nd International Symposium on Special Topics in Chemical Propulsion: Combustion of Boron Based Solid Propellants and Solid Fuels, Germany, March 4-6, 1991, Speaker: B. Natan. Presentation topic: "Combustion Behavior of Boron Carbide in Solid Fuel Ramjets."
13. 2nd International Symposium on Special Topics in Chemical Propulsion: Combustion of Boron Based Solid Propellants and Solid Fuels, Germany, March 4-6, 1991, Speaker: B. Natan. Presentation topic: "Experimental Investigation of the Effect of Bypass Air on Boron Combustion in a Solid Fuel Ramjet."

14. 7th Annual Symposium of the Israeli Section of the Combustion Institute, Jerusalem, Israel, Nov. 14, 1991, Speaker: B. Natan. Presentation topic: "Experimental Investigation of Boron Combustion in a Solid Fuel Ramjet."
15. 8th Annual Symposium of the Israeli Section of the Combustion Institute, Accre, Israel, Nov. 26, 1991, Speaker: B. Natan. Presentation topic: "Bypass Air Injection Effects on Boron Combustion in Solid Fuel Ramjets."
16. 29th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Monterey, CA, USA, June 28-30, 1993, Speaker: B. Natan. Presentation topic: "Ignition of Boron Particles Coated by a Thin Titanium Film."
17. 45th International Astronautical Congress, Jerusalem, Israel, October 9-14, 1994, Speaker: A. Ben-Yakar. Presentation topic: "Analytical Modeling of the Gas Generator Frequency Response in Large Hybrid Rocket Boosters."
18. 35th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 15-16, 1995, Speaker: Y. Halupovich. Presentation topic: "Numerical Solution of Turbulent Supersonic Flow over a Backward Facing Step."
19. 36th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 21-22, 1996, Speaker: A. Osherov. Presentation topic: "Investigation of the Hybrid Motor Starting Problem."
20. 36th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 21-22, 1996, Speaker: B. Natan. Presentation topic: "Computation of Two-Dimensional Turbulent Mixing of Jets with Main Crossflow in a Channel."
21. 12th Annual Symposium of the Israeli Section of the Combustion Institute, Haifa, Israel, Dec. 12, 1996, Speaker: R. Ben-Arosh. Presentation topic: "Computations of Solid Fuel Combustion Under Supersonic Cross Flow."
22. 37th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 26-27, 1997, Speaker: B. Natan. Presentation topic: "The Flow of Gel Fuels in Tapered Injectors."
23. 37th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 26-27, 1997, Speaker: A. Osherov. Presentation topic: "Investigation of the Combustion Instability in a Liquid Rocket Engine."
24. 33rd AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Seattle, WA, July 6-9, 1997, Speaker: B. Natan. Presentation topic: "The Injection Process of Gel Fuels."
25. 33rd AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Seattle, WA, July 6-9, 1997, Speaker: G. Nachmoni. Presentation topic: "Combustion Characteristics of Gel Fuels."
26. 33rd AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Seattle, WA, July 6-9, 1997, Speaker: R. Ben-Arosh. Presentation topic: "The Reacting Flowfield within a Supersonic Combustion Solid Fuel Ramjet".
27. 33rd AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Seattle, WA, July 6-9, 1997, Speaker: A. Cohen-Zur. Presentation topic: "Experimental Investigation of a Supersonic Combustion Solid Fuel Ramjet".
28. 33rd AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Seattle, WA, July 6-9, 1997, Speaker: R. Ben-Arosh. Presentation topic: "Mixing of Supersonic Airflow with Fuel Added Along the Wall in a Sudden Expansion Chamber."

29. 13th Annual Symposium of the Israeli Section of the Combustion Institute, Beer-Sheva, Israel, Dec. 25, 1997, Speaker: A. Cohen-Zur. Presentation topic: "Experimental Investigation of a Supersonic Combustion Solid Fuel Ramjet".
30. 38th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 24-25, 1998, Speaker: G. Nachmoni. Presentation topic: "Experimental Investigation of the Combustion of Gel Fuels."
31. 34th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Cleveland, OH, July 13-15, 1998, Speaker: B. Natan. Presentation topic: "Atomization Characteristics of Gel Fuels."
32. 15th Annual Symposium of the Israeli Section of the Combustion Institute, Beer-Sheva, Israel, Dec. 8, 1999, Speaker: B. Natan. Presentation topic: "Numerical Simulation of the Flow of Power-Law Gel Propellants in Converging Injectors."
33. 37th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Salt Lake City, OH, July 8-11, 2001, Speaker: B. Natan. Presentation topic: "Air-Blast Atomization of Gel Fuels."
34. 42nd Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 20-21, 2002, Speaker: Y. Solomon. Presentation topic: "Burning of Organic-Gellant-Based Gel Fuels in Atmospheric Pressure."
35. 8th International Workshop on Combustion and Propulsion - Rocket Propulsion: Present and Future, Pozzuoli, Italy, June 16-20, 2002, Speaker: B. Natan. Presentation topic: "Combustion Characteristics of Organic-Gellant-Based Gel Fuels."
36. 39th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Huntsville AL, July 20-23, 2003, Speaker: B. Natan. Presentation topic: "Design of a Lab-scale Hydrogen Peroxide/HTPB Hybrid Rocket Motor."
37. 45th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 23-24, 2005, Speaker: V. Chernov. Presentation topic: "Experimental Investigation of a Pulsatile Injection Gel Spray."
38. 45th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 23-24, 2005, Speaker: A. Kunin. Presentation topic: "A Simple Model of a Gel Spray Diffusion Flame."
39. 41st AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Tucson AZ, July 10-13, 2005, Speaker: B. Natan. Presentation topic: "Experimental Characterization of a Pulsatile Injection Gel Spray."
40. 41st AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Tucson AZ, July 10-13, 2005, Speaker: B. Natan. Presentation topic: "Influence of Organic Gel Droplets on the Behavior of Gel Spray Diffusion Flames."
41. 17th International Symposium on Air Breathing Engines (ISABE), Munich, Germany, Sept. 4-9, 2005, Speaker: H. Ciezki. Presentation topic: "An Overview of Investigations on Gel Fuels for Ramjet Applications."
42. 42nd AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Sacramento CA, July 9-13, 2006, Speaker: B. Natan. Presentation topic: "Combustion of Gel Fuels based on Organic Gellants."
43. 2006 International Conference on Liquid Atomization and Spray Systems, Kyoto, Japan Aug.27-Sept.1, 2006, Speaker: V. Chernov, Presentation topic: "The Effect of Periodic Disturbances on Non-Newtonian Fluid Sprays."
44. 3rd European Combustion Meeting, ECM2007, Chania, Greece, 11-13 April 2007, Speaker: B. Natan. Presentation topic: "Combustion Related Aspects of Gel Fuels."

45. 2nd European Conference on Aerospace Sciences, Brussels, Belgium, July 2-7, 2007, Speaker: B. Natan. Presentation topic: "Atomization of Gel Fuels using Impinging Jet Atomizers."
46. 2nd European Conference on Aerospace Sciences, Brussels, Belgium, July 2-7, 2007, Speaker: B. Natan. Presentation topic: "Modeling the Combustion of Gel Fuel Droplets."
47. 2nd European Conference on Aerospace Sciences, Brussels, Belgium, July 2-7, 2007, Speaker: V. Chernov. Presentation topic: "The Feeding Process of Metallized Gel Fuels."
48. XVIII ISABE Beijing, China September 2 – 7, 2007, Speaker: B. Natan. Presentation topic: "Theoretical Modeling of the Combustion of Organic-Gellant-Based Gel Fuel Droplets."
49. 48th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 27-28, 2008, Speaker: A. Desyatkov. Presentation topic: "Characterization of Gelled Jet-A1 Fuel with High Vapor Pressure Solvents and Metal Additives."
50. 48th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 27-28, 2008, Speaker: A. Kunin. Presentation topic: "Preliminarily Modeling of the Combustion of Gel Fuel Droplets."
51. 48th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 27-28, 2008, Speaker: V. Chernov. Presentation topic: "The Effect of Metal Particulates on the Rheological Properties of Gel Fluids."
52. 48th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 27-28, 2008, Speaker: D. Bar-or. Presentation topic: "Experimental Evaluation of Gel Fuel Droplet Burning Rates."
53. 44th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Hartford CT, July 20-23, 2008, Speaker: B. Natan. Presentation topic: "Preliminary Model of the Transient Combustion of Organic-Gellant-Based Gel Fuel Droplets."
54. 44th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Hartford CT, July 20-23, 2008, Speaker: V. Chernov. Presentation topic: "Simplified Rheological Modeling of Metallized Gel Fuels."
55. 44th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Hartford CT, July 20-23, 2008, Speaker: B. Natan. Presentation topic: "Experimental Characterization of Gelled Fuels with High Vapor Pressure Species and Metal Additives."
56. 44th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Hartford CT, July 20-23, 2008, Speaker: B. Natan. Presentation topic: "Experimental Evaluation of Gel Fuel Droplet Burning Rates at Sub and Super Critical Conditions."
57. 47th AIAA Aerospace Sciences Meeting, Orlando FL, Jan. 5-8, 2009, Speaker: A. Haddad. Presentation topic: "Performance Assessments of a Boron Containing Gel Fuel Ramjet."
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62. 50th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 17-18, 2010, Speaker: V. Marvin. Presentation topic: "The Effect of HTPB Addition on Paraffin-Based Hybrid-Rocket Fuel Properties."
63. 50th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 17-18, 2010, Speaker: B. Natan. Presentation topic: "Hypergolic Ignition of Oxidizers and Fuels by Fuel Gelation and Suspension of Reactive or Catalyst Particles."
64. 50th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 17-18, 2010, Speaker: V. Marvin. Presentation topic: "The Effect of Temperature Distribution in the Propellant Condensed Layer on Aluminum Agglomeration."
65. 46th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Nashville, TN, July 25-28, 2010, Speaker: V. Chernov. Presentation topic: "On Shear-Thinning Gel Propellants with Metal Powders."
66. 46th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Nashville, TN, July 25-28, 2010, Speaker: B. Natan. Presentation topic: "Development of a Lab-Scale Gel Fuel Ramjet Combustor."
67. 46th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Nashville, TN, July 25-28, 2010, Speaker: B. Natan. Presentation topic: "Hypergolic Ignition of Oxidizers and Fuels by Fuel Gelation and Suspension of Reactive or Catalyst Particles."
70. 51st Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 23-24, 2011, Speaker: I. Kronhaus. Presentation topic: "CAMILA Hall Thruster Modeling Using A 2D PIC Simulation."
71. 51st Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 23-24, 2011, Speaker: V. Marvin. Presentation topic: "Evaluation of the Mechanical Properties of a mixed HTPB-Paraffin Hybrid Rocket Fuel."
72. 51st Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 23-24, 2011, Speaker: B. Natan. Presentation topic: "Development of a Lab-Scale Gel Fuel Ramjet Combustor."
73. The 32nd International Electric Propulsion Conference, Wiesbaden, Germany, September 11–15, 2011, Speaker: I. Kronhaus. Presentation topic: "Modeling Physical Processes in CAMILA Hall Thruster by PIC Method."
74. 2011 ISABE Gothenburg, Sweden, September 11-16, 2011, Speaker: B. Natan. Presentation topic: "Development of a Lab-Scale Gel Fuel Ramjet Combustor."
75. The 52st Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 29 – March 1, 2012. Speaker: G. Gafni. Presentation topic: "Experimental Investigation of a Lab-Scale Ramjet Combustor with Aluminum Powder filled Gel Fuels."
76. 48th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, Atlanta, GA, Aug. 2-6, 2012. Speaker: I. Kronhaus. Presentation topic: "Characterization of CAMILA Hall Thruster Discharge using Electrical Probe Measurements."

77. The 53rd Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, March 6-7, 2013. Speaker: S-J. Kim. Presentation topic: "Inlet Geometry Effects on the Flowfield of a Ducted Rocket Combustor."
78. The 53rd Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, March 6-7, 2013. Speaker: G. Gafni. Presentation topic: "Experimental Investigation of a Ramjet Combustor Using an Aluminized Hydrocarbon Gel Fuel."
79. 49th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, San Jose, CA, July 13-17, 2013. Speaker: B. Natan. Presentation topic: "Inlet Geometry Effects on the Internal Performance of a Variable Flow Ducted Rocket Combustor."
80. 49th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, San Jose, CA, July 13-17, 2013. Speaker: B. Natan. Presentation topic: "Experimental Investigation of a Ramjet Combustor Using an Aluminized Gel Fuel."
81. 49th AIAA/ASEE/ASME/SAE Joint Propulsion Conference, San Jose, CA, July 13-17, 2013. Speaker: B. Natan. Presentation topic: "Numerical Solution of the Flowfield in an Aluminized Gel Fuel Ramjet."

Participation in Organizing Conferences

1. Chair, Organizing Committee, 8th Annual Symposium of the Israeli Section of the Combustion Institute, Accre, Israel, Nov. 26, 1992.
2. Chair, Organizing Committee, 14th Annual Symposium of the Israeli Section of the Combustion Institute, Haifa, Israel, Nov. 1998.
3. Chair, Organizing Committee, 23rd Annual Symposium of the Israeli Section of the Combustion Institute, Haifa, Israel, Dec. 25, 2008.
4. Chair, Papers Committee, 51st Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 24-25, 2011.
5. Member, Organizing Committee, 51st Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 24-25, 2011.
6. Member, Papers Committee, 52nd Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 29-March 1, 2012.
7. Member, Papers Committee, 53rd Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, March 6-7, 2013.
8. Member, Papers Committee, 54th Israel Annual Conference on Aerospace Sciences, Tel Aviv and Haifa, Israel, Feb. 19-20, 2014.