

Alon Gany – Selected Publications

These selected publications represent the different research efforts and subjects, and they are grouped accordingly when possible.

- Gany, A., Caveny, L.H., and Summerfield, M., "Aerothermochemistry of Metal Erosion by Hot Reactive Gases", *J. of Heat Transfer (Trans. of ASME)*, Vol. 100, No. 3, August 1978, pp. 531-536; also, in Ch. 7.4 of the book "*Principles of Combustion*", by K.K. Kuo, J. Wiley & Sons, New York, 1986, pp. 695-704.
- Gany, A. and Caveny, L.H., "Agglomeration and Ignition Mechanism of Aluminum Particles in Solid Propellants", *Proceedings of the 17th Symposium (International) on Combustion*, The Combustion Institute, August 1978, pp. 1453-1461.
- Yavor, Y., Rosenband, V., and Gany, A., "Reduced Agglomeration Resulting from Nickel Coating of Aluminum Particles in Solid Propellants", *International Journal of Energetic Materials and Chemical Propulsion*, Vol. 9, No. 6, 2010, pp. 477-492.
- Hahma, A., Gany, A., and Palovuori, K., "Combustion of Activated Aluminum", *Combustion and Flame*, Vol. 145, No. 3, May 2006, pp. 464-480.
- Saraf, S. and Gany, A., "Experimental Investigation of Metalized Solid Fuel Ramjet Combustor", *International Journal of Energetic Materials and Chemical Propulsion*, Vol. 11, No. 2, 2012, pp. 107-121.
- Gany, A., "Combustion of Boron-Containing Fuels in Solid Fuel Ramjets", *International Journal of Energetic Materials and Chemical Propulsion*, Vol. 2, Issue 1-6, 1993, pp. 91-112.
- Gany, A., "Thermodynamic Limitation on Boron Energy Realization in Ramjet Propulsion", *Acta Astronautica*, Vol. 98, May-June 2014, pp. 228-232.
- Natan, B. and Gany, A., "Ignition and Combustion of Boron Particles in the Flowfield of a Solid Fuel Ramjet", *J. of Propulsion and Power*, Vol. 7, No. 1, Jan.-Feb. 1991, pp. 37-43.
- Natan, B. and Gany, A., "Effect of Bypass Air on Boron Combustion in Solid Fuel Ramjets", *J. of Propulsion and Power*, Vol. 9, No. 1, Jan.-Feb. 1993, pp. 155-157.
- Gany, A., "Effect of Fuel Properties on the Specific Thrust of a Ramjet Engine", *Defence Science Journal*, Vol. 56, No. 3, July 2006, pp. 321-328.
- Gany, A. and Netzer, D.W., "Fuel Performance Evaluation for the Solid-Fueled Ramjet", *International Journal of Turbo and Jet-Engines*, Vol. 2, No. 2, 1985, pp. 157-168.
- Netzer, A. and Gany, A., "Burning and Flameholding Characteristics of a Miniature Solid Fuel Ramjet Combustor", *J. of Propulsion and Power*, Vol. 7, No. 3, May-June 1991, pp. 357-363.

- Gany, A., "Analysis of Gun-Launched, Solid Fuel Ramjet Projectiles", *International Journal of Energetic Materials and Chemical Propulsion*, Vol. 1. Issue 1-6, 1991, pp. 289-309.
- Pelosi-Pinhas, D. and Gany, A., "Bypass-Regulated Solid Fuel Ramjet Combustor in Variable Flight Conditions", *Journal of Propulsion and Power*, Vol. 19, No. 1, Jan.-Feb. 2003, pp. 73-80.
- Ben-Yakar, A., Natan, B. and Gany, A., "Investigation of a Solid Fuel Scramjet Combustor", *J. of Propulsion and Power*, Vol. 14, No. 4, July-August 1998, pp. 447-455.
- Komornik, D. and Gany, A., "Investigation of a Ducted Rocket with a Paraffin/Oxygen Hybrid Gas Generator", *Journal of Propulsion and Power*, Vol. 35, No. 6, Nov-Dec 2019, pp. 1108-1115. DOI: <http://arc.aiaa.org/doi/abs/10.2514/1.B37448>
- Ben-Arosh, R. and Gany, A., "Similarity and Scale Effects in Solid Fuel Ramjet Combustors", *J. of Propulsion and Power*, Vol. 8, No. 3, May-June 1992, pp. 615-623.
- Riska, E. and Gany, A., "Similarity and Scaling in a Liquid-Fuel Ramjet Combustor", *J. of Propulsion and Power*, Vol. 39, No. 5, 2023, pp. 643-652. <https://doi.org/10.2514/1.B38934>
- Rosenband, V. and Gany, A., "Application of Activated Aluminum Powders for Generation of Hydrogen from Water", *International Journal of Hydrogen Energy*, Vol. 35, Issue 20, Oct. 2010, pp. 10898-10904, ISSN 0360-3199.
- Elitzur, S., Rosenband, V., and Gany, A., "Study of Hydrogen Production and Storage Based on Aluminum-Water Reaction", *International Journal of Hydrogen Energy*, Vol. 39, 2014, pp. 6328-6334.
- Elitzur, S., Rosenband, V., and Gany, A., "On-board Hydrogen Production for Auxiliary Power in Passenger Aircraft", *International Journal of Hydrogen Energy*, Vol 42, May 2017, pp. 14003-14009, <http://dx.doi.org/10.1016/j.ijhydene.2017.02.037>
- Gany, A., "Innovative Concepts for High-Speed Underwater Propulsion", *International Journal of Energetic Materials and Chemical Propulsion (IJEMCP)*, Vol. 17, Issue 2, 2018, pp. 83-109. DOI: 10.1615/IntJEnergeticMaterialsChemProp.2018027877.
- Valensi, S. and Gany, A., "Open-Sea Testing of Two-Phase Marine Ramjet Propulsion", Special Issue 'Two-Phase Flows in Marine Propulsion and Engineering', *Journal of Marine Science and Engineering (JMSE)*, Vol. 11, No. 2220, Nov 2023. <https://doi.org/10.3390/jmse11122220>
- Gany, A. and Gofer, A., "Study of a Novel Air Augmented Waterjet Boost Concept", *Journal of Ship Production and Design (JSPD)*, Vol. 30, No. 1, Feb. 2014, pp. 1-6.

- Albagli, D. and Gany, A., "High Speed Bubbly Nozzle Flow with Heat, Mass and Momentum Interactions", *International Journal of Heat and Mass Transfer*, Vol. 46, No. 11, 2003, pp. 1993-2003.
- Mor, M. and Gany, A., "Analysis of Two-Phase Homogeneous Bubbly Flows Including Friction and Mass Addition", *Journal of Fluid Engineering, Transaction of ASME*, Vol. 126, No. 1, Jan. 2004, pp. 102-109.
- Arad-Ludar, L. and Gany, A., "Experimental Study of Supercavitation Bubble Development over Bodies in a Duct Flow", *Journal of Marine Science and Engineering (JMSE)*, Vol. 8, No. 1, 2020, Paper 28 (pp. 1-11), Online Jan 8, 2020. doi:10.3390/jmse8010028.
- Eisen, N.E. and Gany, A., "Investigation of a Marine Water-Breathing Hybrid Ram-Rocket Motor", *Journal of Propulsion and Power*, Vol. 38, No. 3, May-June 2022, pp. 370-377. <https://doi.org/10.2514/1.B38590>
- Dinisman, S., Eisen, N.E., and Gany, A., "Performance of Water-Augmented Metallized Hybrid Propellant Ram Rocket during Underwater Motion", *Journal of Propulsion and Power*, published online 31 March 2025.
- Dinisman, S. and Gany, A., "Study of Boron Fuel in a Water-Breathing Ramjet", *Journal of Propulsion and Power*, 2025.
- Gany, A. and Aharon, I., "Internal Ballistics Considerations of Nozzleless Rocket Motors", a Special Issue dedicated to Martin Summerfield, *J. of Propulsion and Power*, Vol. 15, No. 6, Nov.-Dec. 1999, pp. 866-873.
- Michaels, D. and Gany, A., "Modeling and Testing of a Tube-in-Tube Concept for Separation of Bodies in Space", *Acta Astronautica*, Vol. 129, 2016, pp. 214-222.
- Zamir, I., Ben-Reuven, M., Gany, A., and Grinstein, D., "Investigation of Electrically Controlled Ammonium Nitrate – Epoxy Solid Propellant at High Pressures", *Propellants, Explosives, Pyrotechnics*, Vol. 46, 2021, pp. 477-483. DOI: 10.1002/prop.202000208
- Weinstein, A. and Gany, A., "Testing and Modeling Liquefying Fuel Combustion in Hybrid Propulsion", *Progress in Propulsion Physics*, Vol. 4, 2013, pp. 99-112.
- Sisi, S. and Gany, A., "Combustion of Plain and Reinforced Paraffin with Nitrous Oxide", *International Journal of Energetic Materials and Chemical Propulsion*, Vol. 14, No. 4, 2015, pp 331-345.
- Elanjickal, S. and Gany, A., "Enhancement of the Fuel Regression Rate in Hybrid Propulsion by Expandable Graphite Additive", *Combustion Science and Technology*, Vol. 192, No. 7, 2020, pp. 1253-1273. doi:10.1080/00102202.2020.1748017.
- Muller, G.T. and Gany, A., "Increasing Burning Rate and Motor Thrust by Expandable Graphite Additives", *Journal of Propulsion and Power*, Vol. 39, No. 5, 2023, pp. 709-717. <https://doi.org/10.2514/1.B39126>