

Publications List – Dr. Tali Bar-Kohany

After the current rank

Peer reviewed journals

1. **Bar-Kohany, T.**, (2021), "Minimal heating rate for isobaric nucleation at the spinodal in liquids", *International Journal of Heat and Mass Transfer*, Vol. 165, 120636.
2. **Bar-Kohany, T.**, and Sher, E. (2021), "Flash boiling atomization under negative pressure conditions", *Atomization and Sprays*, Vol. 31(8), pp. 1-8.
3. Sazhin, S., **Bar-Kohany, T.**, Nissar, Z., Antonov, D., Strizhak, P.A., and Rybdylova, O.D., (2020), "A new Approach to modeling micro-explosions in composite droplets", *International Journal of Heat and Mass Transfer*, Vol. 161, 120238.
4. Arogeti, M., Sher, E., and **Bar-Kohany, T.**, (2019), "Drop impact on small targets with different target-to-drop diameters ratio", *Chemical Engineering Science*, Vol. 193, pp.89-101.
5. **Bar-Kohany, T.** and Amsalem, Y., (2018), "Nucleation temperature under various heating rates", *International Journal of Heat and Mass Transfer*, Vol. 126, pp. 411-415.
6. Dagan, Y. and **Bar-Kohany, T.**, (2018), "Flame propagation through three-phase methane-hydrate particles", *Combustion and Flames*, Vol. 193, pp.25-35.
7. Arogeti, M., Sher, E. and **Bar-Kohany, T.**, (2017), "A single drop impact on a flat, dry surface – A unified correlation", *Atomization and Sprays*, Vol.27(9), pp.759-770.
8. Eluk, T., Levy, A., Korytnyi, E. and **Bar-Kohany, T.**, (2017) "Transition Mechanism between combustion regions in swirling flow in downer reactors", *Energy and Fuels*, Vol.31(2),pp.1927-1934.
9. **Bar-Kohany, T.** and Levy, M., (2016), "State of the art review of flash boiling atomization", *Atomization and Sprays*, Vol. 26(12), pp. 1259-1305.
10. **Bar-Kohany, T.** and Sirignano, W.A., (2016), "Transient combustion of a methane-hydrate sphere", *Combustion and Flames*, Vol.163, pp.284-300.
11. Cohen, I., **Bar-Kohany, T.**, German, U. and Ziskind, G., (2014), "Optimization of the temperature profiles due to a nitrogen jet impinging on a TLD detector", *Radiation and Measurements*, Vol.70, pp. 48-51.
12. Sher, E., Sher, I. and **Bar-Kohany, T.**, (2013), "Another view of the upper and intermediate explosion limits of a H₂-O₂ system.", *Elsevier, International Journal of Hydrogen Energy* 38, pp.14912-14914, 2013
13. **Bar-Kohany, T.** and Dahan, K., (2012), "Evaluation of the one-step hydrogen-oxygen global reaction rate in a non-premixed mixture to predict auto-ignition limits", *International Journal of Hydrogen Energy*, Vol.37(19), pp.14669-14675.
14. **Bar-Kohany, T.** and Stern, A., (2011), "Prediction of Container Hermeticity for Isostatic Pressuring Process", *Research Bulletin of the Australian Institute of High Energetic Materials*, Vol.1, pp.10-27.
15. **Bar-Kohany, T.**, Rozenfeld, R., Weinstein, M., Abraham, A., German, U., Alfassi, Z.B. and Ziskind, G., (2011), "Thermal Behavior of a LiF Crystal Mounted in a TLD Card and Heated by Jet Impingement", *Radiation and Measurements*, Vol.46(12), pp.1432-1435.

Conference proceedings

16. Nahon, L., **Bar-Kohany, T.**, Rabinovich, E., and Aharon, Y., "Critical heat flux in critical annulus under zero flow conditions with radial heat losses", NURETH, August 2019, USA.

Submitted:

17. Shalel, A., **Bar-Kohany T.**, and Katoshevski, D., "Multivariable extension of the General Dynamic Equation for Aerosols with Application to Fire Extinguishing by Powder Dispersal", *Submitted to Combustion Theory and Modeling*.
18. Avni, O., **Bar-Kohany, T.**, Sher, E., "Flash boiling atomization triggered and driven by intensive radiation", *Submitted to Thermal Science and Engineering Progress*.

In preparation:

19. Lankry, A., Reuven R., Haustein, H., Ziskind, G., and **Bar-Kohany, T.**, "Onset of Heterogeneous Nucleation of HFE-7100 on rapidly heated Micro-Heater".
20. Dahan, N., **Bar-Kohany, T.**, and Haustein, H. "Nucleate boiling and bubble growth of methanol and hfe-7100 under atmospheric and high-pressure conditions".

Oral presentations

Invited Lectures

1. **Bar-Kohany, T.**, "Surface effects on slow and rapid Onset of Nucleate Boiling (ONB)", Surface Wettability Effects on Phase Change Phenomena (SWEP Workshop), Brighton, UK, 6-8, October 2021.
2. **Bar-Kohany, T.**, "Combustion of three-phase methane-hydrate spheres", Joint aerospace and fluid dynamics reviews seminars, University of Maryland, College Park, April 2018.
3. **Bar-Kohany, T.**, "Two-Phase Choked Flow in Service of Flash Boiling Sprays", The 30th Annual Symposium of the Israeli Section of the Combustion Institute, December 2016.

International Conferences

Oral presentations

4. Lankry, A., Reuven R., Haustein, H., Ziskind, G., and **Bar-Kohany, T.**, "Onset of Heterogeneous Nucleation of HFE-7100 on rapidly heated Micro-Heater at one atmosphere", 15th ICLASS 2021, September 2021, Online.
5. **Bar-Kohany, T.**, Antonov, D., Strizhak, P.A., and Sazhin, S. Sergei, "Nucleation inception due to conductive heating in composite droplets: experimental observations and modelling", 15th ICLASS 2021, September 2021, Online.
6. ¹Sazhin, S., **Bar-Kohany, T.**, Nissar, Z., Antonov, D., Strizhak, P.A., and Rybdylova, O.D., "Micro-explosions in composite droplets: experimental observations and modeling", 15th ICLASS 2021, September 2021, Online.
7. **Bar-Kohany, T.**, and Sher, E. "Flash boiling atomization under tensile conditions", 15th ICLASS 2021, September 2021, Online.
8. **Bar-Kohany, T.**, and Amsalem, Y., "Universal correlation for nucleation inception due to rapid heating", 29th ICLASS, September 2-4, Paris, France, 2019.

9. Shalel, A., **Bar-Kohany, T.**, and Katoshevski, D., "Multi-scale powder dispersal solution using the Extended General Dynamic Equation for Aerosols", 29th ILASS, September 2-4, Paris, France, 2019.
10. ¹**Bar-Kohany, T.**, Haustein, H.D., and Elias, E., "Lifetime of a tensioned liquid following a depressurization impulse", 14th ICLASS, July 22-26, Chicago, USA, 2018¹.
11. **Bar-Kohany, T.**, and Dagan, Y., "Evaporation and combustion of spray consisting of three-phase methane-hydrate particles", 14th ICLASS, July 22-26, Chicago, USA, 2018¹.
12. **Bar-Kohany, T.**, Presentation for holding the 2020 ILASS conference in Israel, 28th ILASS-Europe, Valencia, Spain, 2017¹.
13. Shalel A., **Bar-Kohany, T.** and Katoshevski, D., "Optimization of Extinguishing Powder dispersal", IAAR, Technion, Israel, 2016.
14. ¹**Bar-Kohany, T.**, Sirignano, W.A., "Combustion of a methane-hydrate particle", 27th ILASS, September, 4-7, 2016, Brighton, UK.
15. **Bar-Kohany, T.**, "Mechanism of spray formation by bi-component liquid flashing", *TAU-UMD joint workshop on single and multiphase heat transfer*, July, 25-29, Tel-Aviv, 2016.
16. Eluk, T., Korytnyi, E., Levy, A. and **Bar-Kohany, T.**, "Transition between robust equilibrium design points for multiphase combustion in downers", 9th *International conference on multiphase flow*, May, 22-27, 2016, Firenze, Italy.
17. Eluk, T., **Bar-Kohany, T.**, Korytnyi, E., and Levy, A., "Pulverized coal combustion modelling for downer type reactors", 8th *International conference for conveying and handling of particulate solids*, May 2015, Tel-Aviv, Israel.
18. **Bar-Kohany, T.** and Dahan, K., "Hydrogen Release, Dispersion and Auto-Ignition In Enclosures", 7th *Mediterranean Combustion Science (MCS)*, September 11-15, 2011, Sardinia, Italy.

National Conferences – Oral presentations

19. **Bar-Kohany, T.**, "Onset of Nucleation Boiling due to rapid heating – How does it relate to combustion?", 33th Annual Symposium of the Israeli Section of the Combustion institute (ISC-33), December, 2019, Tel-Aviv, Israel.
20. Shalel, A., **Bar-Kohany, T.**, and Katoshevski, D., "Fire powder extinguishing analysis using the Extended General Dynamic Equation (GDE)", 33th Annual Symposium of the Israeli Section of the Combustion institute (ISC-33), December, 2019, Tel-Aviv, Israel.
21. **Bar-Kohany, T.**, and Dagan, Y., "Combustion of spray consisting of three-phase particles", 32th Annual Symposium of the Israeli Section of the Combustion institute (ISC-32), December, 2018, Tel-Aviv, Israel.
22. Amsalem, Y., and **Bar-Kohany, T.**, "Cubic Equations of State and nucleation inception in boiling due to rapid heating", 35th Israeli Conference of Mechanical Engineering (ICME-35), 9-10 October, 2018, Ben-Gurion University, Israel.
23. Shalel, A., **Bar-Kohany, T.**, and Katoshevski, D., (2017), "Optimization of extinguishing powder dispersal", The 27th Annual meeting of the Israeli Association of Aerosol Research (IAAR-27), March 13, Technion, Israel.
24. ¹**Bar-Kohany, T.**, "Depressurization of liquid to low or negative pressure; What is it good for?", 34th Israeli Conference of Mechanical Engineering (ICME-34), 21-22 November, 2016, Technion, Israel.

¹ Session Chair & Lecturer

25. Eluk, T., Levy, A., Kortnyi, E., and **Bar-Kohany, T.**, "Controlling robust design points for gas-solid combustion in co-current reactors", 34th Israeli Conference of Mechanical Engineering (ICME-34), 21-22 November, 2016, Technion, Israel. שגיאה! הסימניה אינה מוגדרת.
26. Eluk, T., Levy, A., Kortnyi, E., and **Bar-Kohany, T.**, "Transition between robust equilibrium design points for gas-solid combustion on co-current reactors", 40th Symposium on computational mechanics (ISCM-40), April, 7, 2016, Tel-Aviv University, Israel
27. **Bar-Kohany, T.**, and Aharon, Y., "Characteristic times and fuel response to a sudden increase in core reactivity", 28th Conference of Nuclear societies in Israel, 12-14, October, 2016 Dead-Sea, Israel.
28. Dahan, K., and **Bar-Kohany, T.**, "", 33th Israeli Conference of Mechanical Engineering (ICME-33), 2015, Technion, Israel.
29. Cohen, I., German, U., Ziskind, G., and **Bar-Kohany, T.**, "Parametric analysis of temperature profiles due to a nitrogen jet impinging on a TL Detector", 33th Israeli Conference of Mechanical Engineering (ICME-33), 2015, Technion, Israel.
30. **Bar-Kohany, T.**, and Sirignano, W.A., "Combustion of a methane-hydrate particle", 28th Annual Symposium of the Israeli Section of the Combustion Institute, December, 2014, Tel-Aviv, Israel
31. Cohen, I., German, U., Ziskind, G., and **Bar-Kohany, T.**, "Aanalysis of temperature profiles due to a nitrogen jet impinging on a TLD", 26th Annual Symposium of the Israeli Section of the Combustion Institute, 21-23 February, 2012, Tel-Aviv, Israel
32. Rozenfeld, R., **Bar-Kohany, T.**, Weinstein, M., Abraham, A., German, U., Alfassi, Z.B. and Ziskind, G., "Study of thermal behavior of a TLD detector due to heating by Jet impingement", *The 26th Conference of the Nuclear Societies in Israel*, February, 2012, Dead-Sea, Israel
33. Rozenfeld, R., **Bar-Kohany, T.**, Weinstein, M., Abraham, A., German, U., Alfassi, Z.B. and Ziskind, G., "Thermal Behavior of a TLD Detector Due to Heating by Jet Impingement", *The 25th Conference of the Nuclear Societies in Israel*, February, 2010, Dead-Sea, Israel
34. **Bar-Kohany, T.** and Sher, E., "Author look into the 3 Explosion Limits", 24th Annual Symposium of the Israel Section of the Combustion Institute, December, 2009, Tel-Aviv, Israel

Posters (International & National)

35. Avni, O., **Bar-Kohany, T.**, Sher, E., "Flas boiling atomization triggered and driven by intensive radiation", 35th Annual Symposium of the Israeli Section of the Combustion institute (ISC-30), December, 2016, Tel-Aviv, Israel.
36. **Bar-Kohany, T.**, and Amsalem, Y., "Prediction of nucleation temperature under moderate to high heating rates", GRC-Micro and Nanoscale Phase Change Heat Transfer, February 3-8, Lucca, Italy, 2019.
37. Shalel, A., **Bar-Kohany, T.**, and Katoshevski, D, "Optimization of extinguishing powder dispersal", 30th Annual Symposium of the Israeli Section of the Combustion institute (ISC-30), December, 2016, Tel-Aviv, Israel.
38. **Bar-Kohany, T.** and Sher, E., "Critical Discharge from Flash Boiling Atomizer", 10th Joint European Thermodynamic Conference (JETC), June 22-24, 2009, Copenhagen, Denmark.

Before the current rank

Peer reviewed journals

1. Sher, E., **Bar-Kohany, T.** and Rashkovan, A., (2008), "Flash Boiling Atomization", *Invited Review, Progress in Energy and Combustion Science (PECS)*, Vol.34(4), pp.417.
2. **Bar-Kohany, T.**, I. Sher and E. Sher, (2007), "Choked Flow of a Two-Phase Mixture Through and Aperture: a Theoretical Approach", *Atomization and Sprays*, Vol.17(5), pp.431-449.
3. **Bar-Kohany, T.** and Stern, A., (2007), "Lifetime Estimation of MOEMS Devices", *Journal of Electronic Packaging*, Vol.129, pp.144-148.
4. **Bar-Kohany, T.** and E. Sher,(2004), "Effervescent Atomization Under Sub-sonic and Choked Conditions – a Theoretical Approach", *Chem. Eng. Sci.*, Vol. 59, pp.5987-5995.
5. **Bar-Kohany, T.** and E. Sher, (2004), "Subsonic Atomization Effervescent: a Theoretical Approach", *Atomization and Sprays*, Vol. 14(6), pp.495-509.
6. **Bar-Kohany, T.** and E. Sher, (2002), "Optimization of Variable Valve Timing for Maximizing Performance of an Unthrottled SI Engine – a Theoretical Study", *Energy*, Vol. 27, pp.757-775.
7. **Bar-Kohany, T.** and E. Sher, (1999), "Using the 2nd Law of Thermodynamics to Optimize Variable Valve Timing for Maximizing Torque in a Throttled SI Engine", *SAE Technical Papers*, 1999-01-0328.

International Conferences - Oral presentations

1. **Bar-Kohany, T.** and E. Sher, "Spray Formation by Bi-Component Liquid Flashing Under Sub- and Choked Conditions", *ICHMT*, June5-10, 2005, Antalya, Turkey.
2. A. Stern, M. Kemelman, **T. Bar-Kohany**, and K. Feldman, "Hermetic Encapsulation of MOEMS by Fluxless Soldering", *Welding and Joining*, January 25-28, 2005, Tel-Aviv, Israel
3. K. Feldman, **T. Bar-Kohany** and A. Stern, "Detection of Fine Leaks in MOEM Hermetic Sealed Cavities", *Welding and Joining*, January 25-28, 2005, Tel-Aviv, Israel.
4. **Bar-Kohany, T.** and E. Sher, "Spray Formation by Bi-Component Liquid Flashing Under Sub- and Choked Conditions: a Theoretical Approach", *ILASS-EUROPE*, September 6-8, 2004, Nottingham, UK.
5. **Bar-Kohany, T.** and E. Sher, "Spray Formation by Bi-Component Liquid Flashing: a Theoretical Approach", *ILASS-EUROPE*, September 9-11, 2002, Zaragoza, Spain.
6. **Bar-Kohany, T.** and E. Sher, "Nucleation – Theory and Reality", Bi-National Israel-Britain *Workshop on Applied Mathematical Methods in Spray Combustion*, 2001, Beer-Sheva, Israel.
7. **Bar-Kohany, T.** and E. Sher, "Using the 2nd Law of Thermodynamics to Optimize Variable Valve Timing for Maximizing Torque in a Throttled SI Engine", *SAE International*, March 1-4, 1999, Detroit, Canada.

National Conferences – Oral presentations

1. **Bar-Kohany T.**, Feldman, K. and A. Stern, "Optical Micro-electro-mechanical Systems – Wafer Level Encapsulation", *The 12th Israeli Materials Engineering Conference*, March 2006, Tel-Aviv, Israel.
2. **Bar-Kohany T.** and A. Stern, "Leak Testing of MOEMS – Theory and Practice", 30th Israel Conference on Mechanical Engineering, May 29-30, 2005, Tel-Aviv, Israel.

3. Sher, E., Rashkovan, A. and **Bar-Kohany, T.**, "Effervescent Spray", *21th Annual Symposium of the Israel Section of the Combustion Institute*, December, 2005, Technion, Haifa, Israel
4. **Bar-Kohany, T.** and E. Sher, "A Study of the Mechanism of Sprays Formation by Bi-component Liquid Flashing", *30th Israel Conference on Mechanical Engineering*, May 29-30, 2005, Tel-Aviv, Israel
5. **Bar-Kohany, T.** and E. Sher, "Spray Formation by Bi-Component Liquid Flashing: a Theoretical Approach", *20th Israeli Conference on Combustion*, Beer-Sheva, Israel, December 9, 2004.
6. **Bar-Kohany T.** and A. Stern, "Hermeticity Tests of Sealed Cavities", *ASNT-Israel*, July 14, 2004.
7. **Bar-Kohany T.** and A. Stern, "Non-Destructive Leak Tests in Hermetic Sealed Cavities – Practical and Theoretical Considerations", *ISME- Israel National Conference on Welding*, March, 2004.
8. **Bar-Kohany, T.** and E. Sher, "A Study of Spray Formation by Bi-component Liquid Flashing", *29th Israel Conference on Mechanical Engineering*, May 12-13, 2003, Haifa, Israel
9. **Bar-Kohany, T.** and E. Sher, "Variable Valve Timing for Gasoline Engines", *28th Israel Conference on Mechanical Engineering*, June 14-15, 2000, Beer-Sheva, Israel

Posters

1. **Bar-Kohany, T.** and E. Sher, "A theoretical investigation of spray formation by bi-component liquid flashing", *18th Annual Symposium of the Israeli Section of the Combustion institute (ISC-18)*, December, 2002, Tel-Aviv, Israel.