

Murat Barisik, PhD

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EDUCATION

- Ph.D.** Old Dominion University, Norfolk, VA, USA, May, 2012
Major: Aerospace Engineering,
Dissertation: Molecular Dynamics Studies on Nanoscale Gas Transport
Advisor: Prof. Dr. Ali Beskok
- M.S.** Middle East Technical University, Ankara, Turkey, June, 2008
Major: Mechanical Engineering,
Dissertation: Analytical Solution for Single Phase Microtube Heat Transfer including Axial Conduction and Viscous Dissipation
Advisor: Prof. Dr. Almila Guvenc Yazicioglu, *Co-Advisor:* Prof. Dr. Sadik Kakac
- B.S.** Middle East Technical University, Ankara, Turkey, June, 2006
Major: Mechanical Engineering,

EXPERIENCE

- Associate Professor:** Izmir Institute of Technology, Mechanical Eng., Turkey (*11/18 to present*).
- Local Steering Committee:** ICTP-ECAR (ICTP – Eurasian Centre for Advanced Research) (*8/18 to present*).
- Assistant Professor:** Izmir Institute of Technology, Mechanical Eng., Turkey (*8/14 to 11/18*).
- Assistant Research Professor:** Southern Methodist University, Mechanical Eng., USA (*8/13 to 8/14*).
- Research Scientist:** Old Dominion University, Institute of Micro/Nanotechnology, USA (*8/12 to 8/13*).
- Postdoctoral Researcher:** Old Dominion University, Institute of Micro/Nanotechnology, USA (*5/12 to 8/12*).
- Research Assistant:** Old Dominion University, Mechanical & Aerospace Eng., USA (*8/08 to 5/12*).
- Teaching Assistant:** Middle East Technical University, Mechanical Eng., Turkey (*8/06 to 8/08*).
- Student Assistant:** Middle East Technical University, Mechanical Eng., Turkey (*9/04 to 5/06*).

Awards

- Received “*Young Scientist*” award from the Science Academy (BAGEP-2020)
- Received “*Outstanding Young Scientist*” award from the Turkish Academy of Sciences (TUBA-GEBIP-2017)
- Received “*Brain Circulation Scheme*” award from the European Union Marie-Curie COFUND program 2014
- Ranked 1st in graduate program of Old Dominion University and received “*Faculty Award in Aerospace Engineering 2012*”

Performance Summary for the last 5 years (2014-2020)

- Brought \$500,000 research fund as a sole PI, and \$450,000 as a co-PI with collaborations,
- Published 35 journal papers and received 1000 citations.

Professional Interests

Research Interests: Nanoscale heat transfer; Nanoscale gas flows; Nanoscale liquid flow; Transport in micro/nanoscale porous systems; Nanoscale surface wetting; Surface electric charge of nanoscale systems.

Teaching Interests: Core areas of Thermo-fluids, including specialist elective courses on: Micro/Nano flows, Microfluidics, Micro/Nano Heat Transport, Electrokinetic Phenomena

PROFESSIONAL ACTIVITIES

Referee for the Following Professional Journals

- Nature Communications
- Microfluidics and Nanofluidics
- Chemical Physics Letters
- Physics of Fluids
- International Journal of Thermal Sciences
- Langmuir
- Physical Review E
- The Journal of Chemical Physics
- International Journal of Heat and Mass Transfer
- The Journal of Physical Chemistry
- Physical Chemistry Chemical Physics
- ASME Journal of Fluids Engineering
- IEEE Electron Device Letters
- International Journal of Thermophysics

Organizer of the Following International Conferences

- International Porous and Powder Materials Symposium and Exhibition, Mugla, Turkey, September 2019
- 14th Nanoscience and Nanotechnology Conference, Cesme, Turkey, September 2018
- Symposium on Advances in Thermal and Fluid Sciences, Urla, Turkey, June 2018
- International Porous and Powder Materials Symposium and Exhibition, Aydın, Turkey, September 2017

TEACHING

Courses

- *Heat Transfer*, ME340 (2020-Fall, 2020-Spring, 2019-Fall, 2018-Fall, 2017-Fall, 2016-Spring).
- *Fluid Dynamics I*, ME301 (2019-Spring, 2018-Spring, 2016-Fall)
- *Fluid Dynamics II*, ME303 (2017-Fall, 2016-Spring)
- *Heat Exchangers*, ME425 (2016-Spring, 2015-Spring)
- *Introduction to Microfluidics*, ME444 (2018-Fall, 2017-Fall, 2016-Fall, 2015-Fall)
- *Microfluidic Theory*, ME555 (2020-Spring, 2019-Fall 2018-, 2017-, 2016-, 2015-, 2014-Spring).
- *Special Topics in Mechanical Engineering*, ME601 (2017-Fall, 2014-Spring)

Directed Graduate Theses - Completed

- A. Cihan Ozdemir, MS in Mechanical Engineering at IZTECH, "*MD Studies on Wetting Behavior of Silicon Surfaces and Heat Transfer Characteristics of Electrolyte Solution Filled Nano-channels*", (07/20).
- F. Esin Yakin, MS in Bioengineering at IZTECH, "*Numerical and Experimental Investigations on the Zeta Potential of Different Size Mesoporous Silica Nanoparticles with Different Porous Properties*", (07/20).
- B. Oyku Alan, MS in Mechanical Engineering at IZTECH, "*Investigations on Surface Electric Charge of Silica Nanoparticles with Different Surface Roughnesses*", (01/20).
- H. Gokberk Ozcelik, MS in Mechanical Engineering at IZTECH, "*Molecular Dynamics Studies on Manipulation of Surface Wetting Using Nanoscale Surface Structures*" (09/19).
- Orhan Oral, MS in Mechanical Engineering at IZTECH, "*Numerical Investigations of Flash-Boiling Gasoline Direct Injection Sprays*"(07/19).
- Gulce Kalyoncu, MS in Energy Engineering at IZTECH, "*Investigation of Liquid Transport in Micro and Nanoscale Porous Media at Different Pore to Throat Size Ratios*" (08/17).
- Safa Sabet, MS in Mech. Eng. at IZTECH, "*Numerical Determination of Permeability and Interfacial Convective Heat Transfer Coefficient for Non-Isotropic and Periodic Dual Scale Porous Medium*" (08/15).
- Gizem Arslan, MS in Mechanical Engineering at IZTECH, "*A study on COP improvement of a household refrigerator by using an adsorption heat pump*" (08/15).

Directed Graduate Theses - Ongoing

- Safa Sabet, PhD in IZTECH, "*Micro-scale Gas Transport in Porous Media*", (08/15 to present).
- Tumcan Sen, PhD in Mechanical Engineering at IZTECH, "*Surface Electric Charge Properties and Ionic Transport within Nano-porous Silica Systems*", (01/16 to present).
- Onur Yenigun, PhD in Mechanical Engineering at IZTECH, "*Uniform/non-uniform Electric Field Controlled Heat Transfer through Nano-channels*", (09/17 to present).
- Ezgi Satiroglu, MS in Energy Engineering at IZTECH, "*Wetting Behavior under Pinning Effects and Slip Length Characterization of Nano-patterned Silica Surfaces*", (09/18 to present).

- Deniz Timur, MS in Mechanical Engineering at IZTECH, "*Electric Field Controlled Nano-mechanics of Water filled Graphene Nano-channels*", (09/19 to present).
- Celal Can Ozen, MS in Mechanical Engineering at IZTECH, "*Effect of Nano-scale Patterns on Heat Transfer through Silica Nano-channels*", (09/18 to present).
- Oyku Alan, PhD in Mechanical Engineering at IZTECH, "*Electrokinetic Interactions of Mesoporous Silica Particles in Nano-systems*", (01/20 to present).

Co-advised Graduate Theses - Completed

- Truong Quoc Vo, PhD in University of Ulsan - Korea, "*Near-surface viscosity effects on capillary rise of water in nanotubes*", (01/15 to 06/18).
- Alper Tunga Celebi, PhD in Southern Methodist University - USA, "*Molecular Dynamics Studies on Nanoscale Confined Liquids*", (09/14 to 05/18).
- Chinh Thanh Nguyen, MS in University of Ulsan - Korea, "Wetting of chemically heterogeneous striped surfaces: Molecular dynamics simulations", (01/14 to 06/16).
- An Truong Pham, MS in University of Ulsan - Korea, "*Interfacial thermal resistance between the graphene-coated copper and liquid water*", (01/12 to 06/14).

RESEARCH

Externally Funded Research Projects

1. "Preparation of Monolithic Silica Aerogels as Novel, Super-insulating Materials - Characterization of Thermal Conductivity Coefficients with Experiments and Molecular Simulations," N. Gizli (PI), **M Barisik (co-PI)**, TUBITAK-1001, **\$250,000 (under review)**.
2. "Development of innovative approaches for joining structural components in aerospace applications, characterization of their environmental durability and mechanical performance," M Tanoglu (PI), **M Barisik (co-PI)**, E. Aktas (co-PI), *collaborating with Turkish Aerospace Industries* TUBITAK-1003, 218M701, **\$450,000 (11/19 to present)**.
3. "Characterization of Surface Electric Charges and Electrostatic Force Interactions of Mesoporous Silica Particles," **M Barisik (PI)**, TUBITAK-1001, 118M710, **\$120,000 (11/18 to present)**.
4. "Wetting and Flow Control using Biomimicked Nano Surface Structures," **M Barisik (PI)**, TUBITAK-3501, *Carrier Award*, 217M460, **\$100,000 (05/18 to 08/20)**.
5. "Wetting and Heat Transfer Control at Nanoscale," **M Barisik (PI)**, Outstanding Young Scientist program of the Turkish Academy of Sciences, **\$25,000** (TUBA-GEBIP-2017), (11/17 to 06/20).
6. "Molecular Level Investigation of Nano-Scale Gas Flows," **M Barisik (PI)**, EU Marie-Curie COFUND under Grant No:115C026 **\$200,000 (04/15 to 02/18)**.
7. "Efficiency Increase of a Household Refrigerator by Using Adsorption Bed Type Heat Pump," **M Barisik (PI)**, Turkish Ministry of Science, Industry and Technology (SAN-TEZ) under Grant No: 0290.STZ.2013-2, **\$50,000 (04/15 to 09/15)**.
8. "Molecular Modeling of Silicon/Water Interface," **M Barisik (PI)**, Extreme Science and Engineering Discovery Environment (XSEDE) under Grant No: TG-CTS130001 **1M CPU hours (10/12 to 10/13)**.

Internally Funded Research Projects

1. "Characterization of Gas Flow in Micro/nano-porous Systems with Dual Porosity" **M Barisik (PI)**, IZTECH IYTE0245, **\$1,500 (10/18 to 05/20)**.
2. "Modeling of the Variation in Surface Charge Density by the Size of Bio-inspired Surface Structures" **M Barisik (PI)**, IZTECH 2017IYTE57, **\$1,000 (05/18 to 01/20)**.
3. "Modeling of the Variation in Surface Charge Density of Micro/nano-scale Channels by the Channel Height and Length" **M Barisik (PI)**, IZTECH 2017IYTE49 **\$800 (05/18 to 01/20)**.
4. "Theoretical Investigation of Micro/nano Liquid Flows" **M Barisik (PI)**, 2016IYTE26 **\$1,000 (06/16 to 12/16)**.

Book Chapters

1. **Barisik M**, Beskok A (2016) Interface Resistance and Thermal Transport in Nano-Scale Confined Liquids. *Microscale and Nanoscale Convective Heat Transfer: Concepts, Analysis, and Applications*, CRC Taylor and Francis, *opening chapter and cover design*.
2. Mobedi M, **Barisik M**, Nakayama A (2016) Characterization of Volume-averaged Transport Properties for Micro-scale Porous Media at Slip-flow Regime. *Microscale and Nanoscale Convective Heat Transfer: Concepts, Analysis, and Applications*, CRC Taylor and Francis.
3. Beskok A, **Barisik M** (2015) Molecular Dynamics Studies on Nanoscale Gas Transport. *Encyclopedia of Microfluidics and Nanofluidics*, Springer.

Journals

Articles are categorized according to research field.

Nano-scale Gas Transport (NGT):

- J-NGT10 Sabet S, **Barisik M** (2020) Characterization of Gas Permeability in Dual Scale Micro/Nano-Porous Media by an Extended Kozeny-Carman-Klinkenberg Model. *Physics of Fluids*, *ready to submit*.
- J-NGT9 Sabet S, **Barisik M**, Mobedi M, Beskok A (2019) An Extended Kozeny-Carman-Klinkenberg Model for Gas Permeability in Micro/Nano-Porous Media. *Physics of Fluids*, 31:112001.
- J-NGT8 Kalyoncu G, **Barisik M** (2016) The extended Graetz problem for micro-slit geometries; analytical coupling of rarefaction, axial conduction and viscous dissipation. *Int. J. of Therm. Sci.*, 110: 261–269.
- J-NGT7 **Barisik M**, Beskok A (2016) ‘Law of the Nano-Wall’ in Nano-Channel Gas Flows. *Microfluidics Nanofluidics*, 20(3): 46.
- J-NGT6 **Barisik M**, Beskok A (2015) Molecular Free Paths in Nano-Scale Gas Flows. *Microfluidics Nanofluidics*, 18(5-6):1365-1371.
- J-NGT5 **Barisik M**, Yazicioglu AG, Cetin B, Kakac S (2015) Analytical Solution of Thermally Developing Microtube Heat Transfer Including Axial Conduction, Viscous Dissipation, and Rarefaction Effects. *International Communications in Heat and Mass Transfer*, 67: 81–88.
- J-NGT4 **Barisik M**, Beskok A (2014) Scale Effects in Gas Nano Flows. *Physics of Fluids*, 26:052003.
- J-NGT3 **Barisik M**, Beskok A (2012) Surface–Gas Interaction Effects on Nanoscale Gas Flows. *Microfluidics Nanofluidics*, 13(5):789–798.
- J-NGT2 **Barisik M**, Beskok A (2011) Molecular Dynamics Simulations of Shear Driven Gas Flows in Nano-Channels. *Microfluidics Nanofluidics*, 11(5):611–622.
- J-NGT1 **Barisik M**, Kim B, Beskok A (2010) Smart Wall Model for Molecular Dynamics Simulations of Nanoscale Gas Flows. *Communications in Computational Physics* 7:977–993.

Nano-scale Heat Transfer (NHT):

- J-NHT12 Ozdemir AC, **Barisik M** (2020) Ionic Concentration Effects on Thermal Resistance at the Water/Silicon Interface. *International Journal of Heat and Mass Transfer*, *ready to submit*.
- J-NHT11 Yenigün O, **Barisik M** (2020) Local Heat Transfer Control using Liquid Dielectrophoresis at Graphene/Water Interfaces. *International Journal of Heat and Mass Transfer*, *under review*.
- J-NHT10 Yenigün O, **Barisik M** (2019) Electric Field Controlled Heat Transfer through Silicon and Nano-confined Water. *Nanoscale and Microscale Thermophysical Engineering*, 23:304-316.
- J-NHT9 Yenigün O, **Barisik M** (2019) Effect of nano-film thickness on thermal resistance at water/silicon interface. *International Journal of Heat and Mass Transfer*, 134, 634-640.
- J-NHT8 Sabet S, Mobedi M, **Barisik M**, Nakayama A (2018) Heat Transfer Enhancement by Aligned Solid Blocks with Intraparticle Parallel Pores. *Int. J. of Num. Met. for Heat&Fluid Flow*, 28(11):2716-2733.
- J-NHT7 Pham TA, **Barisik M**, Kim BH (2016) Interfacial Thermal Resistance between The Graphene-Coated Copper and Liquid Water. *Int. J. of Heat and Mass Transfer*, 97: 422–431.
- J-NHT6 Vo T, **Barisik M**, Kim BH (2016) Atomic Density Effects on Temperature Characteristics and Thermal Transport at Grain Boundaries through a Proper Bin Size Selection. *Phys.Rev. E*, 144, 194707.
- J-NHT5 Pham TA, **Barisik M**, Kim BH (2014) Molecular Dynamics Simulations of Kapitza Length for Argon-Silicon and Water-Silicon Interfaces. *Int. J. of Precision Eng. and Manuf.*, 15(2):323-329.

- J-NHT4 Pham TA, **Barisik M**, Kim BH (2013) Pressure Dependence of Kapitza Resistance at Gold/Water and Silicon/Water Interfaces. *Journal of Chemical Physics*, 139:244702.
- J-NHT3 **Barisik M**, Beskok A (2013) Temperature Dependence of Thermal Resistance at the Water/Silicon Interface. *International Journal of Thermal Sciences*, 77:47–54.
- J-NHT2 **Barisik M**, Beskok A (2012) Boundary Treatment Effects on Molecular Dynamics Simulations of Interface Thermal Resistance. *Journal of Computational Physics*, 231:7881–7892.
- J-NHT1 Shi Z, **Barisik M**, Beskok A (2012) Molecular dynamics modeling of thermal resistance at argon-graphite and argon-silver interfaces. *International Journal of Thermal Sciences*, 59:29–37.

Nano-scale Surface Wetting (NSW):

- J-NSW6 Ozcelik GH, Satiroglu E, **Barisik M** (2020) Size Dependent Influence of the Contact Line Pinning on Wetting of Nano-textured/patterned Silica Surfaces. *Nanoscale*, doi.org/10.1039/D0NR05392A.
- J-NSW5 Ozcelik GH, Ozdemir AC, Kim B, **Barisik M** (2020) Wetting of Single Crystalline and Amorphous Silicon Surfaces: Effective Range of Intermolecular Forces for Wetting. *Mol. Sim.*, 46 (3), 224–234
- J-NSW4 Ozcelik GH, Sozen Y, H Sahin, **Barisik M** (2020) Parametrizing Nonbonded Interactions between Silica and Water from First Principles. *Applied Surface Science*, 504, 144359.
- J-NSW3 **Barisik M** (2018) Modelling Wetting Behavior of Silica Surfaces by Molecular Dynamics. *Journal of The Faculty of Engineering and Architecture of Gazi University*, 33(1), 337–344.
- J-NSW2 Nguyen CT, **Barisik M**, Kim BH (2018) Wetting of Chemically Heterogeneous Striped Surfaces: Molecular Dynamics Simulations. *AIP Advances*, 8, 065003.
- J-NSW1 **Barisik M**, Beskok A (2013) Wetting Characterization of Silicon (1,0,0) Surface. *Molecular Simulation*, 39(9):700–709. *Selected as the cover article.*

Nano-scale Liquid Transport (NLT):

- J-NLT7 Sen T, **Barisik M** (2020) Non-Newtonian Electrokinetic Effects on the Navier-Stokes Solution of Pressure Driven Nano-channel Slip Flows, *Journal of Fluid Mechanics*, *ready to submit.*
- J-NLT6 Sen T, **Barisik M** (2020) Slip Effects on Ionic Current of Viscoelectric Electroviscous Flows through Different Length Nanofluidic Channels, *Langmuir*, 36(31):9191–9203. *Selected as the cover art.*
- J-NLT5 Celebi AT, **Barisik M**, Beskok A (2018) Surface charge-controlled transport of water in graphene nano-channels. *Microfluidics Nanofluidics*, 22(1):7.
- J-NLT4 Celebi AT, **Barisik M**, Beskok A (2017) Electric field-controlled transport of water in graphene nano-channels. *The Journal of Chemical Physics*, 147(16):164311.
- J-NLT3 Kalyoncu G, **Barisik M** (2017) Analytical solution of micro-/nanoscale convective liquid flows in tubes and slits. *Microfluidics Nanofluidics*, 21(9):147.
- J-NLT2 Vo T, **Barisik M**, Kim BH (2015) Near Surface Viscosity Effects on Capillary Rise of Water in Nanotubes. *Physical Review E*, 92, 053009.
- J-NLT1 **Barisik M**, Beskok A (2011) Equilibrium Molecular Dynamics Studies on Nanoscale-confined Fluids. *Microfluidics Nanofluidics*, 11(3):269–282.

Nano-scale Electrokinetic Phenomena (NEP):

- J-NEP9 Alan O, **Barisik M** (2020) Size Dependent Temperature Effects on the Surface Charge Properties of Silica Nanoparticles with Various Surface Patterns/Roughness, *Physical Chemistry Chemical Physics*, *under review.*
- J-NEP8 Yakin FE, **Barisik M**, Sen T (2020) Pore Size and Porosity Dependent Zeta Potentials of Mesoporous Silica Nanoparticles, *Journal of Physical Chemistry C*, 124(36),19579–19587. *Selected as the cover art.*
- J-NEP7 Alan O, **Barisik M**, Ozcelik GH (2020) Roughness Effects on Surface Charge Properties of Silica Nanoparticles, *Journal of Physical Chemistry C*, 124 (13), 7274–7286.
- J-NEP6 Sen T, **Barisik M** (2019) Pore connectivity effects on the internal surface electric charge of mesoporous silica, *Journal of Colloid and Interface Science*, 297, 10:1365–1373.
- J-NEP5 Ozcelik GH, **Barisik M** (2019) Surface Charge of Nano-patterned Silica Surfaces. *Physical Chemistry Chemical Physics*, 21:7576–7587.
- J-NEP4 Sen T, **Barisik M** (2019) Internal surface electric charge characterization of mesoporous silica. *Nature Scientific Reports*, 9(1), 137.

- J-NEP3 Sen T, **Barisik M** (2018) Size Dependent Surface Charge Properties of Silica Nano-Channels: Double Layer Overlap and Inlet/Outlet Effects. *Physical Chemistry Chemical Physics*, 20:16719-16728.
- J-NEP2 Atalay S, **Barisik M**, Qian S, Beskok A (2014) Surface Charge of a Nanoparticle Interacting with a Flat Substrate, *Journal of Physical Chemistry C*, 118(20):10927–10935.
- J-NEP1 **Barisik M**, Atalay S, Qian S, Beskok A (2014) Size dependent surface charge properties of silica nanoparticles. *Journal of Physical Chemistry C*, 118(4):1836–1842.

Conference Proceedings

1. **Barisik M** (2016) Molecular Modeling of Force Driven Gas Flows in Nano-channels. 9th International Conference on Computational Fluid Dynamics, ICCFD9-2016-284.
2. **Barisik M**, Shi Z, Beskok A (2012) Heat Conduction and Interface Thermal Resistance in Liquid Argon Filled Silver and Graphite Nanochannels. ASME 3th Micro/Nanoscale Heat & Mass Transfer International Conference, doi:10.1115/MNHMT2012-75231.
3. **Barisik M**, Beskok A (2011) MD Simulations of Nano-Scale Gas Flows: A Case Study of Couette Flow at Kn=10. 27thAIP Conference Proceedings, 1333:707–711, doi:10.1063/1.3562729.

Invited Talks

1. **Barisik M** (2021) "Law of the Nano-wall" in Nano-channel Gas Flows, The 32nd International Symposium on Rarefied Gas Dynamics, Seoul, South Korea, July.
2. **Barisik M** (2018) Calculating and Modeling Micro/nano-scale Effects in Fluid Transport, 2018 Symposium on Advances in Thermal and Fluid Sciences, Urla, Turkey, June.
3. **Barisik M** (2018) Molecular Level Investigation of Nanoscale Interface Thermal Resistance, 7th Condense Matter Physics Meeting, Urla, Turkey, Nisan.
4. **Barisik M** (2017) Molecular Level Investigation of Nanoscale Interface Thermal Resistance, Recent Progress in the Physics of Thermal Transport, Urla, Turkey, June.
5. **Barisik M** (2017) Molecular Level Investigation of Nanoscale Interface Thermal Resistance, Sabanci University, Istanbul, Turkey, June.

Conference Presentations

1. Satiroglu E, **Barisik M** (2019) Molecular Dynamic Studies on Wetting Behavior of Nanopatterned Surfaces, Int. Porous and Powder Mat. Symp. and Exhib., Marmaris, Turkey, October.
2. Alan O, **Barisik M** (2019) Surface Condition Effects On Electric Charge of Mesoporous Silica Nanoparticles, Int. Porous and Powder Mat. Symp. and Exhib., Marmaris, Turkey, October.
3. Yakin FE, Sen T, **Barisik M** (2019) The numerical investigation of surface charge of mesoporous silica nanoparticles, 6th Prague-Weizmann Summer school Advanced Drug Discovery, Prague, July.
4. Yenigun O, **Barisik M** (2019) Effect of Electric Field on Interfacial Thermal Resistance Between Silicon and Water at Nanoscales, 6th International Conference on Heat Transfer and Fluid Flow, Lisbon, Portugal, August. *Best Paper Award*.
5. **Barisik M**, Sabet S, Beskok A (2019) Gas Permeability in Micro/Nano-Porous Media: An extended Kozeny-Carman-Klinkenberg Model, Interpore 2019, Valencia, Spain, May.
6. **Barisik M**, Sen T (2019) Surface electric charge inside mesoporous silica at different pore sizes and porosities, Interpore 2019, Valencia, Spain, May.
7. **Barisik M** (2018) Calculating and Modeling Micro/nano-scale Effects in Fluid Transport, 14th Nanoscience and Nanotechnology Conference, Cesme, Turkey, September.
8. Alan BO, **Barisik M** (2018) Surface Charge Properties of Mesoporous Silica Nanoparticles, 14th Nanoscience and Nanotechnology Conference, Cesme, Turkey, September.
9. Yenigun O, **Barisik M** (2018) MD Studies on Thermal Resistance Between Water and Silicon Nano-films with Different Thicknesses, 14th Nanoscience and Nanotechnology Conference, Cesme, Turkey.
10. Sen T, **Barisik M** (2018) Characterization of Surface Charge Properties Inside Mesoporous Silica, 14th Nanoscience and Nanotechnology Conference, Cesme, Turkey, September.
11. **Barisik M**, Sen T (2018) Electrical Double Layer Overlap and Inlet/Outlet Effects on Charge of Silica Nanochannels. ASME16th International Conference on Nano/Micro/Minichannels, Dubrovnik, Croatia.

12. **Barisik M**, Ozcelik G (2018) Nanoscale Roughness Effects on Electrical Charge of Silica Surfaces. ASME16th International Conference on Nano/Micro/Minichannels, Dubrovnik, Croatia, June.
13. Sen T, **Barisik M** (2017) Electrokinetic Effects on Nano-Scale Liquid Transport in Porous Media, International Porous and Powder Materials Symposium and Exhibition, Aydın, Turkey, September.
14. Ozcelik G, **Barisik M** (2017) Micro/Nano-Scale Wetting Behavior of Nano-Patterned Silica Surfaces, International Porous and Powder Materials Symposium and Exhibition, Aydın, Turkey, September.
15. Kalyoncu G, **Barisik M** (2017) Investigation of Liquid Transport in Micro and Nanoscale Porous Media at Different Pore to Throat Size Ratios, Int. Porous and Pow. Mat. Symp. and Exhib., Turkey, September.
16. Sabet S, **Barisik M** (2017) Investigation of Gas Transport in Micro and Nanoscale Porous Media at Different Pore to Throat Size Ratios, Int. Porous and Powder Mat. Symp. and Exhib., Turkey, September.
17. **Barisik M** (2016) Molecular Modeling of Force Driven Gas Flows in Nano-channels. 9th International Conference on Computational Fluid Dynamics, Istanbul, Turkey, July.
18. Celebi AT, Ghorbanian J, **Barisik M**, Beskok A (2016) Molecular Dynamics Simulations of Water Confined in Graphene Nanochannels. ASME14th ICNMM, Washington, DC, USA, July.
19. **Barisik M**, Beskok A (2016) Modeling Surface Force Effects on Nanochannel Gas Mass Transport. ASME14th International Conference on Nano/Micro/Minichannels, Washington, DC, USA, July.
20. Sabet S, **Barisik M**, Mobedi M (2015) A pore scale study for heat transfer in porous media, International Porous and Powder Materials Symposium and Exhibition, Izmir, Turkey, September.
21. **Barisik M**, Beskok A (2015) Molecular Free Paths in Nano-Scale Gas Flows. ASME13th International Conference on Nanochannels, Microchannels, and Minichannels, San Francisco, CA, USA, July.
22. **Barisik M**, Beskok A (2014) Scale Effects in Force Driven Nano Channel Gas Flows. ASME12th International Conference on Nanochannels, Microchannels, and Minichannels, Chicago, IL, USA, August.
23. **Barisik M**, Beskok A (2014) Temperature Dependence of the Water-Silicon Interface Thermal Resistance. ASME12th International Conference on Nano/Micro/Minichannels, Chicago, Illinois, August.
24. **Barisik M**, Beskok A (2014) Wetting of Nano-Scale Water Droplets on Silicon Surfaces. ASME12th International Conference on Nano/Microchannels, and Minichannels, Chicago, Illinois USA, August.
25. **Barisik M**, Beskok A (2012) MD Simulations of Gas Flows in Nanochannels. ASME10th International Conference on Nanochannels, Microchannels, and Minichannels, Puerto Rico, USA, July.
26. **Barisik M**, Beskok A (2012) MD Simulations of Thermal Resistance at the Solid-Liquid Interface. ASME10th International Conference on Nano/Microchannels, and Minichannels, Puerto Rico, USA, July.
27. **Barisik M**, Shi Z, Beskok A (2012) Heat Conduction and Interface Thermal Resistance in Liquid Argon Filled Silver and Graphite Nanochannels. ASME 3rd Micro/Nanoscale Heat & Mass Transfer International Conference, Atlanta, GA, USA, March.
28. **Barisik M**, Beskok A (2011) MD Simulations Nanoscale Gas Flows. ASME Society-Wide Micro and Nano Technology Forum, Denver, CL, USA, November.
29. **Barisik M**, Beskok A (2011) Interface Thermal Resistance between Liquid Argon and Various Solids. ASME Society-Wide Micro and Nano Technology Forum, Denver, CL, USA, November.
30. **Barisik M**, Beskok A (2011) Surface-Gas Interaction Effects on Nanoscale Gas Flows. 64nd Annual Meeting of the American Physical Society Division of Fluid Dynamics, Baltimore, MD, November.
31. **Barisik M**, Beskok A (2010) Surface Effects on Nanoscale Gas Flows. 63nd Annual Meeting of the American Physical Society Division of Fluid Dynamics, Long Beach, CA, USA, November.
32. **Barisik M**, Beskok A (2010) MD Simulations of Nano-Scale Gas Flows: A Case Study of Couette Flow at $Kn=10$. 27th International Symposium on Rarefied Gas Dynamics, Pacific Grove, California, July.
33. **Barisik M**, Kim B, Beskok A (2009) Molecular Dynamics Simulations of Nanoscale Gas Flows. 62nd Annual Meeting of the American Physical Society Division of Fluid Dynamics, Minneapolis, November.
34. **Barisik M**, Beskok A (2009) Molecular Dynamics Simulations. North Atlantic Treaty Organization (NATO) Advanced Study Institute on Microfluidic Based Microsystems, Izmir, Turkey, September.