

Hâldun Sevinçli

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Biography

Hâldun Sevinçli is currently professor at the Department of Physics, Bilkent University.

He graduated from the Physics Department of Middle East Technical University, where he also received his MSc degree. He finished his PhD at the Physics Department of Bilkent University in 2008 with his studies on theoretical and computational solid state physics. After working at the Materials Science Institute of Dresden Technical University between 2008-2012 as a postdoctoral researcher in several projects, he moved to the Micro- and Nano-technology Department of the Technical University of Denmark. He joined İzmir Institute of Technology in 2013 and moved to the Department of Physics at Bilkent University in 2024.

His research focuses mainly on theory and simulation of quantum transport of charge, spin and heat. These topics include nano-electronics, spintronics, magnetotransport, thermoelectrics, phononics, quantum thermal transport. Ballistic transport, quantum diffusion and localization, scaling theory, multilayer scaling law, anomalous diffusion, quartic dispersion, unconventional tunneling and its applications are the major themes/key words in his research.

Hâldun Sevinçli received BAGEP Young Scientist Prize of Bilim Akademisi (Science Academy-Turkey) in 2014, and Sedat Simavi Science Award in 2017.

Academic Carrier

2024-	Professor Bilkent University, Department of Physics
2019-2023	Professor İzmir Institute of Technology, Department of Materials Science and Engineering
2014-2019	Associate Professor İzmir Institute of Technology, Department of Materials Science and Engineering
2013-2014	Assistant Professor İzmir Institute of Technology, Department of Materials Science and Engineering
2012-2013	Postdoc Technical University of Denmark, Department of Micro- and Nano-technology (Individual postdoc grant from Danish Research Council)
2008-2012	Postdoc Technical University of Dresden, Institute for Materials Science, Chair for Nanotechnology (EU and DFG granted projects)
2003-2008	Research and teaching assistantships Department of Physics, Bilkent University

Education

PhD	Physics Department, Bilkent University (2008) <i>"Electromagnetic properties and phononic energy dissipation in graphene based materials"</i>
MS	Physics Department, Middle East Technical University (2002) <i>"Tunneling time models and 'Superluminality' "</i>
BS	Physics Department, Middle East Technical University (1999)

Scholarships and Awards

2017	Sedat Simavi Science Award
2014	Bilim Akademisi (Science Academy–Turkey) Young Scientist Prize (BAGEP)
2013 – 2014	TÜBİTAK-BİDEB-2232 Yurda Dönüş Araştırma Bursu <i>"Nano-yapılandırılmış grafenin ısı özellikleri"</i> PI: H. Sevinçli
2012 – 2013	Danish Research Council, Individual Postdoc Grant <i>"In silico design of nano-structured thermoelectric materials"</i> PI: H. Sevinçli

Courses taught

General Physics I (PHYS101, Bilkent Uni.)
General Physics II (PHYS102, Bilkent Uni.)
Classical Mechanics (PHYS218, Bilkent Uni.)
Solid State Theory (Phys545, Bilkent Uni.)
Introduction to Computer Programming (MSE-120, İZTECH)
Materials Physics (MSE-215, İZTECH)
Materials Science and Engineering (ME-231, İZTECH)
Introduction to Solid State Physics (MSE-313, İZTECH)
Atomistic Simulation of Materials - I & II (MSE-509&510, İZTECH)
Solid State Physics (MSE-512, İZTECH)
Quantum Mechanics of Materials Science and Engineering (MSE-515, İZTECH)
Transport in Nano-structures (MSE-520, İZTECH)

Thesis supervised

7. *"Quantum transport regimes in Quartic Materials"*
Hazan Özkan, PhD Thesis, İzmir Institute of Technology
June 2024 (co-supervised)
6. *"Quantum Thermal Transport in Two-Dimensional Amorphous Structures"*
Gizem Kurt, PhD Thesis, İzmir Institute of Technology
June 2023
5. *"A computational study of excitation dynamics on semiconductor surfaces"*
Birnur Kaya, MS Thesis, İzmir Institute of Technology
December 2019
4. *"Thermoelectric effect in layered nanostructures"*
Gözde Özbal Sargın, PhD Thesis, İzmir Institute of Technology
July 2019 (co-supervised)
3. *"Electronic, Vibrational and Transport Properties of Quasi-one Dimensional Transition Metal Dichalcogenide Structures"*
Elif Ünsal, MS Thesis, İzmir Institute of Technology
December 2019
2. *"Investigation of anharmonic effects in phonon transport"*
Mustafa Neşet Çınar, MS Thesis, İzmir Institute of Technology
July 2018
1. *"Control of thermal flux in molecular junctions by isomeric switching"*
Gizem Kurt, MS Thesis, İzmir Institute of Technology
July 2017

Memberships

American Physical Society (APS)
Turkish Physical Society (TFD)

Peer Review

Reviewer in: Science, Nature, Nature Materials, Nature Physics, Nano Letters, ACS Nano, Physical Review Letters, Physical Review B, Physical Review Materials, Physical Review Applied, Europhysics Letters, Journal of Physical Chemistry Letters, Journal of Physics: Condensed Matter, 2D Materials, IOP Nanotechnology, Journal of Applied Physics, Journal of Physical Chemistry, Journal of Chemical Physics, Journal of Chemical Physics and Physical Chemistry.

Scientific Conference Organization*

13.05.2022	9 th Condensed Matter Physics İzmir Meeting İYTE, İzmir
17.04.2015	4 th Condensed Matter Physics İzmir Meeting İYTE, İzmir
29.09 - 03.10.2014	Advanced Workshop on Landau-Zener Interferometry and Quantum Control in Condensed Matter ICTP-ECAR, İYTE, İzmir
23-31.08.2014	II. International Summer School on Exact and Numerical Methods for Low-Dimensional Quantum Structures ICTP-ECAR, İYTE, İzmir
09-11.07.2014	GRM-2014: Graphene and Related Materials, Workshop and Summer School İYTE, İzmir

*Served in the organization/scientific committees of the listed scientific conferences.

Publications

Publication statistics: (as of May 2026)

48 ISI publications, 1 non-ISI publication, 2 book chapters
3604 citations (Google-Scholar), 2718 citations (Web of Science)
h-index: 25, i-10 index: 33

ISI Publications

48. "Enhancement of thermoelectric performance in two-dimensional materials: A review of recent progress"
GÖ Sargin, E Durgun, C Sevik, H Sevinçli
Physical Review Materials 10 (2), 020301 (2026)
47. "Computational investigation of electronic, vibrational, and transport properties of silicon phosphide nanoribbons"
GÖ Sargin, MJ Varjovi, DH Ozbey, H Sevinçli, E Durgun
Physical Review Materials 9 (10), 104002 (2025)

46. Thermodynamic Favorability of the 1T Phase over the 1H Phase in Group III Metal Monochalcogenide Zigzag Nanoribbons
E Aliyev, A Mobaraki, H Sevinçli, S Jahangirov
The Journal of Physical Chemistry C **129**, 8354-8360 (2025)
45. "Structural, electronic, vibrational, and thermoelectric properties of Janus Ge₂PX(X = N, As, Sb, and Bi) monolayers"
DH Ozbey, MJ Varjovi, GÖ Sargın, H. Sevinçli, E. Durgun
Physical Review B **110**, 035411 (2024)
44. "*Quantum transport regimes in quartic dispersion materials with Anderson disorder*"
M Polat, H Özkan, H Sevinçli
Journal of Applied Physics **135**, 164301 (2024)
43. "The peculiar potential of transition metal dichalcogenides for thermoelectric applications: A perspective on future computational research"
G Özbal Sargın, S Sarikurt, H Sevinçli, C Sevik
Journal of Applied Physics **133**, 150902 (2023)
42. "*Indirect exchange interaction in two-dimensional materials with quartic dispersion*"
AU Canbolat, **H Sevinçli**, Ö Çakır
Physical Review B **106**, 104409 (2022) [Link]
41. "*Toward Optimized Charge Transport in Multilayer Reduced Graphene Oxides*"
Mustafa Neşet Çınar, Aleandro Antidormi, Viet-Hung Nguyen, Alessandro Kovtun, Samuel Lara-Avila, Andrea Liscio, Jean-Christophe Charlier, Stephan Roche, and **Hâldun Sevinçli**
Nano letters **22**, 2202-2208 (2022) [Link]
40. "*Ballistic thermoelectric transport properties of two-dimensional group III-VI monolayers*"
MN Çınar, GÖ Sargın, K Sevim, B Özdamar, G Kurt, **H Sevinçli**
Physical Review B **103**, 165422 (2021) [Link]
39. "*Enhancement of thermoelectric efficiency of T-HfSe₂ via nanostructuring*"
E Unsal, RT Senger, **H Sevinçli**
Physical Review B **103**, 014104 (2021) [Link]
38. "First-Principles Investigation of Photoisomeric Switching of Vibrational Heat Current across Molecular Junctions"
G Kurt, **H Sevinçli**
Physical Review Applied **14**, 064045 (2020) [Link]

37. "Dimensional crossover and enhanced thermoelectric efficiency due to broken symmetry in graphene antidot lattices"
MN Çınar, **H Sevinçli**
Physical Review Applied **14**, 024075 (2020) [Link]
36. "Collapse of the vacuum in hexagonal graphene quantum dots: A comparative study between tight-binding and mean-field Hubbard models"
M Polat, **H Sevinçli**, AD Güçlü
Physical Review B **101**, 205429 (2020) [Link]
35. "Structural, electronic, and magnetic properties of point defects in polyaniline (C₃N) and graphene monolayers: A comparative study"
K Sevim, **H Sevinçli**
Journal of Applied Physics **127**, 195102 (2020) [Link]
34. "Ballistic thermoelectric properties of monolayer semiconducting transition metal dichalcogenides and oxides"
G. Özbal, R. T. Senger, C. Sevik, and **H. Sevinçli**
Phys. Rev. B **100**, 085415 (2019) [Link]
33. "Green function, quasi-classical Langevin and Kubo–Greenwood methods in quantum thermal transport" (invited review paper)
H Sevinçli, S Roche, G Cuniberti, M Brandbyge, R Gutierrez and L Medrano Sandomas
J. Phys.: Condens. Matter **31**, 273003 (2019) [Link]
32. "Tuning thermal transport in graphene via combinations of molecular antiresonances"
K. Sevim, **H. Sevinçli**
Carbon **140**, 603 (2018) [Link]
31. "Structural, vibrational, and electronic properties of single-layer hexagonal crystals of group IV and V elements"
B. Özdamar, G. Özbal, M. N. Çınar, K. Sevim, G. Kurt, B. Kaya, **H. Sevinçli**
Physical Review B **98**, 045431 (2018) [Link]
30. "Directed Growth of Hydrogen Lines on Graphene: High Throughput Simulations Powered by Evolutionary Algorithm"
G. Özbal, J. T. Falkenberg, M. Brandbyge, R. T. Senger, **H. Sevinçli**
Phys. Rev. Materials **2**, 073406 (2018) [Link]
29. "First-Principle-Based Phonon Transport Properties of Nanoscale Graphene Grain Boundaries"
L.M. Sandomas, **H. Sevinçli**, R. Gutierrez, G. Cuniberti
Advanced Science **5**, 1700365 (2018) [Link]

- 28.** *"Quartic Dispersion, Strong Singularity, Magnetic Instability, and Unique Thermoelectric Properties in Two-Dimensional Hexagonal Lattices of Group-VA Elements"*
H. Sevinçli
Nano Letters **17**, 2589 (2017) [Link]
- 27.** *"Promising thermoelectric properties of phosphorenes"*
C. Sevik, **H. Sevinçli**
Nanotechnology **27**, 355705 (2016) [Link]
- 26.** *"Electronic, phononic, and thermoelectric properties of graphyne sheets"*
H. Sevinçli, C. Sevik
App. Phys. Lett. **105**, 223408 (2014) [Link]
- 25.** *"Phonon scattering in graphene over substrate steps"*
H. Sevinçli, M. Brandbyge
App. Phys. Lett. **105**, 153108 (2014) [Link]
- 24.** *"Quantum interference in thermoelectric molecular junctions: A toy model perspective"*
D. Nozaki, S. M. Avdoshenko, **H. Sevinçli**, G. Cuniberti
Journal of Applied Physics **116**, 074308 (2014) [Link]
- 23.** *"Comparison of electron and phonon transport in disordered semiconductor carbon nanotubes"*
H Sevinçli, T Lehmann, DA Ryndyk, G Cuniberti
Journal of Computational Electronics **12**, 685 (2013) [Link]
- 22.** *"Topological Signatures in the Electronic Structure of Graphene Spirals"*
SM Avdoshenko, P Koskinen, **H Sevinçli**, AA Popov, CG Rocha
Scientific Reports **3**, 1632 (2013) [Link]
- 21.** *"A parabolic model to control quantum interference in T-shaped molecular junctions"*
D Nozaki, **H Sevinçli**, SM Avdoshenko, R Gutierrez, G Cuniberti
Phys. Chem. Chem. Phys. **15**, 13951 (2013) [Link]
- 20.** *"A bottom-up route to enhance thermoelectric figures of merit in graphene nanoribbons"*
H Sevinçli, C Sevik, T Çağın, G Cuniberti
Scientific Reports **3**, 1228 (2013) [Link]
- 19.** *"Prediction of quantum interference in molecular junctions using a parabolic diagram: Understanding the origin of Fano and anti-resonances"*
D Nozaki, SM Avdoshenko, **H Sevinçli**, R Gutierrez, G Cuniberti
Journal of Physics: Conference Series **427**, 012013 (2013) [Link]

- 18.**“Effects of domains in phonon conduction through hybrid boron nitride and graphene sheets”
H Sevinçli, W Li, N Mingo, G Cuniberti, S Roche
Physical Review B **84**, 205444 (2011) [Link]
- 17.**“Phonon engineering in carbon nanotubes by controlling defect concentration”
C Sevik, **H Sevinçli**, G Cuniberti, T Çağın
Nano Letters **11**, 4971 (2011) [Link]
- 16.**“Graphene: Piecing it together” (review paper)
Mark H Rummeli, Claudia G Rocha, Frank Ortmann, Imad Ibrahim, **Haldun Sevinçli**, Felix Börrnert, Jens Kunstmann, Alicja Bachmatiuk, Markus Pötschke, Masashi Shiraishi, Meyya Meyyappan, Bernd Büchner, Stephan Roche, Gianaurelio Cuniberti
Advanced Materials **23**, 4490 (2011) [Link]
- 15.**“Efficient linear scaling method for computing the thermal conductivity of disordered materials”
W Li, **H Sevinçli**, S Roche, G Cuniberti
Physical Review B **83**, 155416 (2011) [Link]
- 14.**“Control of thermal and electronic transport in defect-engineered graphene nanoribbons”
J Haskins, A Kınacı, C Sevik, **H Sevinçli**, G Cuniberti, T Çağın
ACS Nano **5**, 3779 (2011) [Link]
- 13.**“Phonon transport in large scale carbon-based disordered materials: Implementation of an efficient order-N and real-space Kubo methodology”
W Li, **H Sevinçli**, G Cuniberti, S Roche
Physical Review B **82**, 041410 (2010) [Link]
- 12.**“Engineering the figure of merit and thermopower in single-molecule devices connected to semiconducting electrodes”
D Nozaki, **H Sevinçli**, W Li, R Gutiérrez, G Cuniberti
Physical Review B **81**, 235406 (2010) [Link]
- 11.**“Enhanced thermoelectric figure of merit in edge-disordered zigzag graphene nanoribbons”
H Sevinçli, G Cuniberti
Physical Review B **81**, 113401 (2010) [Link]

10. *"First-principles approach to monitoring the band gap and magnetic state of a graphene nanoribbon via its vacancies"*
M Topsakal, E Aktürk, **H Sevinçli**, S Ciraci
Physical Review B **78**, 235435 (2008) [Link]
9. *"Superlattice structures of graphene-based armchair nanoribbons"*
H Sevinçli, M Topsakal, S Ciraci
Physical Review B **78**, 245402 (2008) [Link]
8. *"Electronic and magnetic properties of 3d transition-metal atom adsorbed graphene and graphene nanoribbons"*
H Sevinçli, M Topsakal, E Durgun, S Ciraci
Physical Review B **77**, 195434 (2008) [Link]
7. *"Spin confinement in the superlattices of graphene ribbons"*
M Topsakal, **H Sevinçli**, S Ciraci
Applied Physics Letters **92**, 173118 (2008) [Link]
6. *"Dynamics of phononic dissipation at the atomic scale: Dependence on internal degrees of freedom"*
H Sevinçli, S Mukhopadhyay, RT Senger, S Ciraci
Physical Review B **76**, 205430 (2007) [Link]
5. *"Oscillatory exchange coupling in magnetic molecules"*
H Sevinçli, RT Senger, E Durgun, S Ciraci
Journal of Physics: Condensed Matter **19**, 216205 (2007) [Link]
4. *"Spintronic properties of carbon-based one-dimensional molecular structures"*
E Durgun, RT Senger, **H Sevinçli**, H Mehrez, S Ciraci
Physical Review B **74**, 235413 (2006) [Link]
3. *"Size-dependent alternation of magnetoresistive properties in atomic chains"*
E Durgun, RT Senger, H Mehrez, **H Sevinçli**, S Ciraci
The Journal of chemical physics **125**, 121102 (2006) [Link]
2. *"Non-Markovian decoherence: A critique of the two-level approximation"*
T Hakioğlu, K Savran, **H Sevinçli**, E Meşe
Journal of Magnetism and Magnetic Materials **300**, e579 (2006) [Link]
1. *"The off-resonant aspects of decoherence and a critique of the two-level approximation"*
K Savran, T Hakioğlu, E Mese, **H Sevinçli**
Journal of Physics: Condensed Matter **18**, 345 (2006) [Link]

Book chapters and non-ISI publications

3. "Functionalization of Graphene Nanoribbons"

H Sevinçli, M Topsakal, S Çıracı

Low Dimensional Semiconductor Structures, pp 69-92

Editors: Hilmi Ünlü, Norman J. M. Horing

Springer Berlin Heidelberg (2013)

ISBN: 978-3-642-28423-6

2. "Tailoring the Physical Properties of Graphene"

CG Rocha, MH Rummeli, I Ibrahim, **H Sevinçli**, F Börrnert, J Kunstmann, A Bachmatiuk, M Pötschke, W Li, SAM Makharza, S Roche, B Büchner, G Cuniberti

Graphene: Synthesis and Applications, Vol 3

Editors: W. Choi, J.-W. Lee.

CRC Press (2011).

ISBN: 978-1-469-86187-5

1. "Status of modelling for nanoscale information processing and storage devices"

M. Macucci, S. Roche, A. Correia, J. Greer, X. Bouju, M. Brandbyge, J. J.

Saenz, M. Bescond, D. Rideau, P. Blaise, D. Sanchez-Portal, J. Iniguez, G.

Cuniberti, and **H. Sevinçli**

E-Nano Newsletter **16**, 5 (2009)

Research Projects

2025-2028	Principal Investigator, TÜBİTAK-ARDEB-1001 (124F332) "Quantum Mechanical Investigation of Thermoelectric Efficiency at Ultra-Cold Temperatures and Determination of Candidate Materials"
2021-2025	Principal Investigator, AFOSR - US Air Force Office for Scientific Research (FA9550-21-1-0261) "Quantum Magnetotransport in Two-Dimensional Quartic Materials"
2020-2023	Principal Investigator, TÜBİTAK-ARDEB-1001 (119F353) "Disorder and Many-Body Interaction Effects on Transport in Quartic Dispersion Systems"
2018-2021	Principal Investigator, EU Horizon 2020 FlagEra (ARDEB-117F480) "MECHANIC: Modelling Charge and Heat Transport in 2D-materials based Composites"
2017-2020	Researcher, TÜBİTAK-ARDEB-1001 (117F131) "Enhancement of Thermoelectric Efficiency in Novel Two-dimensional Materials Through Nanostructuring"
2017-2020	Consultant, TÜBİTAK-ARDEB-1001 (116F152) "Electronic, magnetic, transport and optical properties of disordered graphene quantum dots"

2016-2019	Principal Investigator, TÜBİTAK-ARDEB-1001 (115F445) <i>"Molecular phononics: quantum mechanical investigation of the control methods for phonon transport in molecular junctions"</i>
2016-2019	Researcher, TÜBİTAK-ARDEB-1001 (115F408) <i>"Electronic whispering gallery modes and enhanced RKKY interaction in graphene"</i>
2017-2020	Consultant, TÜBİTAK-ARDEB-1003 (115F616) <i>"Quantum dot manufacturing for next generation photonic technologies and QLED applications"</i>
2015-2016	Principal Investigator, İYTE-BAP (2015-36) <i>"Simulation of electronic and transport properties of two-dimensional polycrystalline materials"</i>
2013-2015	Principal Investigator, TÜBİTAK-BİDEB-2232 (113C032) <i>"Thermal properties of nanostructured graphene"</i>
2012-2015	Principal Investigator, The Danish Council for Independent Research, Individual Postdoc Grants <i>"In silico design of nano-structured thermoelectric materials"</i> (Pozisyon değişikliği nedeniyle 2013'de sonuçlandırıldı)
2009-2012	Postdoc, Deutsche Forschungsgemeinschaft Schwerpunktprogramme (SPP1386) <i>"Thermal conductance and thermopower of hybrid heterostructures and superlattices"</i>
2008-2009	Postdoc, EU – FP6-IST (021285-2) <i>"CARDEQ: Carbon Nanotube devices at the quantum limit"</i>
2005-2007	PhD student, TÜBİTAK-ARDEB-1001 (104T537) <i>"Çok Düşük Sürtünme Katsayılı Yüzeylerin Atomal Yapılarının Kuantum Kuramı Kullanılarak Tasarımı"</i>

Invited Talks

03.09.2025	<i>"Peculiar electronic, magnetic and transport properties of two-dimensional quartic dispersion systems"</i> Turkish Physical Association, 41 st Annual Congress, Bodrum, Turkey.
20.12.2024	<i>"Çok katmanlı ve düzensiz iki-boyutlu yapılarda yük taşınımı: Rejimler arası hiyerarşinin kırılması ve yeni bir ölçekleme kuralı"</i> 29 th Ankara Condensed Matter Meeting, Ankara, Turkey.
01.09.2023	<i>"Unconventional transport phenomena in strongly disordered two-dimensional multilayers"</i> Turkish Physical Association, 39 th Annual Congress, Bodrum, Turkey.
08.06.2021	<i>"Charge transport in multilayer graphene oxide"</i> NanoSeminar, Dresden University of Technology (online)

- 01.03.2018 *"Computational investigation of nano-structuring schemes for efficient quantum transport applications"*
Department Seminar, Chemistry Department, Koç University
- 20.07.2017 *"Thermal transport through nano-structured graphene Using Green function and Kubo-Greenwood methods"*
Recent progress in the physics of thermal transport, ICTP-ECAR, İzmir
- 22.03.2017 *"Numerical experiments on quantum transport at different scales"*
Colloquium, Department of Physics, Bilkent University
- 18.08.2016 *"Electron and phonon transport in two-dimensional nano-structured materials"*
NanoSeminar, Technical University of Dresden
- 18.06.2016 *"Electrical and thermal transport properties of nano-structured materials"*
Enhancing International Collaborations on Emerging Materials for Defense Applications via Innovative Theory, Simulation, and Experiment
Thomas Young Centre, UCL, London, UK
- 16.07.2015 *"Green's function and Kubo-Greenwood approaches in quantum thermal transport"*
Workshop on next generation quantum based molecular dynamics: challenges and perspectives, CECAM, Bremen
- 09.04.2015 *"Quantum transport in nano-structured systems: From nanometer to micrometer scale"*
Department Seminar, Physics Department, Middle East Technical University
- 20.12.2013 *"Grafen tabanlı sistemlerde termal ve termoelektrik özellikler"*
19. Yoğun Madde Fiziği Ankara Toplantısı
- 05.01.2012 *"Phonon Engineering and Thermoelectricity in Nano-structured Carbon Based Systems"*
Department Seminar, Department of Physics, İzmir Institute of Technology
- 02.03.2011 *"Modelling electron and phonon transport at the nanoscale"*
DTU Nanotech Seminar, Technical University of Denmark
- 12.06.2008 *"Functionalization of Graphene Based Materials for Nanoscale Applications"*
NanoTr – IV, Nano-Bilim ve Nano-Teknoloji Konferansı, İstanbul

Contributed Talks

- 11.05.2022 *"A Scaling Law for Charge Transport in Layered 2D Materials and Its Application to Reduced Graphene Oxide"*
CNRS-GDR-HOWDI 'Low Dimensional van der Waals Heterostructures'
Dourdan, France
- 28.06.2021 *"Charge Transport Simulations in Multilayer Graphene Oxide"*
FLAG-ERA workshop - MECHANIC, GRANSPORT and GraSage projects
(online)

- 20.04.2021 *"Charge Transport in Multilayer Graphene Oxide: Bulk Diffusion versus Device Properties"*
Graphene and 2DM OnlineConference (GO2021) (online)
- 21.12.2018 *"Grafen Yüzeyinde Yönlendirilmiş Hidrojen Çizgilerinin Büyütülmesi: Evrimsel Algoritma ve Yüksek İşlem Hacimli Simülasyonlar"*
24. Yoğun Madde Fiziği Ankara Toplantısı, Bilkent Üniversitesi
- 15.03.2018 *"Tuning phonon thermal transport through graphene by using ensembles of molecular antiresonances"*
Imagine Nano 2018, Bilbao, Spain
- 11.04.2014 *"Grafen Nano-Şeritlerde Termoelektrik Performansın Düzensizlik Sayesinde Artması"*
Yoğun Madde Fiziği İzmir Toplantısı, İzmir
- 11.05.2012 *"Thermal transport in nanostructured carbon"*
DTU Center for NanoStructured Graphene Meeting
- 05.07.2011 *"Thermal Conductance and Thermopower of Hybrid Heterostructures and Superlattices"*
SPP Nanostrukturierte Thermoelektrika, Wittenberg, Germany
- 31.03.2011 *"Nano-scale thermoelectric transport: molecular junctions and carbon based systems"*
NanoSeminar, TU-Dresden, Germany
- 23.03.2011 *"Strong suppression of thermal conductivity in edgedisordered graphene nanoribbons: Order-N methodology and thermoelectric properties"*
APS March Meeting 2011, Dallas, Texas, USA
- 14.03.2011 *"Strong suppression of thermal conductivity in defected graphene nanoribbons: Order-N methodology and thermoelectric properties"*
DPG Frühjahrstagung 2011, Dresden, Germany
- 01.10.2010 *"Engineering the thermopower in semiconductor-molecule junctions: towards high thermoelectric efficiency at the nanoscale"*
SPP Nanostrukturierte Thermoelektrika, Berlin, Germany
- 09.09.2010 *"Suppression of thermal conduction and enhanced thermoelectric figure of merit in disordered carbon systems"*
Trends in Nanotechnology, TNT-2010, Braga, Portugal
- 23.03.2010 *"Enhanced Thermoelectric Figure of Merit in Edge Disordered Zigzag Graphene Nanoribbons"*
DPG Frühjahrstagung 2010, Regensburg, Germany
- 22.10.2009 *"Electron and phonon transport through edge-disordered graphene nanoribbons"*
Science and Applications of Graphene and Nanotubes 2009, Coma-ruga, Spain
- 22.03.2009 *"Many-Body Effects in Quantum Heat Transport Through Nanostructures"*
DPG Frühjahrstagung 2009, Dresden, Germany

- 13.08.2008 *"Multiple quantum well structures of graphene"*
APS March Meeting 2008, New Orleans, Louisiana, USA
- 13.07.2007 *"Dynamics of phononic dissipation at the atomic scale"*
NanoTr-III, Nano-Bilim ve Nano-Teknoloji Konferansı, Ankara
- 16.05.2007 *"An atomistic description of phononic heat dissipation"*
6th ESF Nanotribology Workshop, Sardinia, Italy
- 08.03.2007 *"Dynamics of phononic dissipation at the atomic scale"*
APS March Meeting 2007, Denver, Colorado, USA
- 03.05.2006 *"Oscillatory exchange coupling in transition-metal capped carbon-chain molecules"*
NanoTr-II, Nano-Bilim ve Nano-Teknoloji Konferansı, Ankara

Poster Presentations

- 06.07.2017 *"Control of Thermal Flux in Molecular Junctions by Isomeric Switching"*
G. Kurt, H. Sevinçli
Japanese-Mediterranean Workshop on Applied Electromagnetic
Engineering for Magnetic, Superconducting, Multifunctional and Nano
Materials, İzmir
- 06.07.2017 *"Controlling thermal transport on graphene via molecular functionalization"*
K. Sevim, H. Sevinçli
Japanese-Mediterranean Workshop on Applied Electromagnetic
Engineering for Magnetic, Superconducting, Multifunctional and Nano
Materials, İzmir
- 06.07.2017 *"A computational database for the electronic, thermal and thermoelectric
properties of group III-VI monolayers"*
M. N. Çınar, G. Özbal, G. Kurt, M. Gençöğlü, K. Sevim, B. Özdamar, H.
Sevinçli
Japanese-Mediterranean Workshop on Applied Electromagnetic
Engineering for Magnetic, Superconducting, Multifunctional and Nano
Materials, İzmir
- 06.07.2017 *"Formation of Hydrogen Lines on Graphene"*
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