<u>Erdoğan Bulut KUL</u>

Curriculum Vitae

Mail Adress: İzmir Institute of Technology Department of Physics 35430 Urla İzmir, TÜRKİYE



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Research Interest

Electronic and magnetic properties of graphene quantum dots Using Tight-Binding, mean-field Hubbard and mandy-body quantum Monte Carlo Methods, published 2 papers.

Recent Research Projects:

- Many-Electron Quantum Effects in Artificial Graphene Nanostructures (2022) TÜBİTAK 119F119, investigator
- Electronic, Magnetic, Transport and Optical Properties of Disordered Graphene Quantum Dots (2017-2019) TÜBİTAK 116F152, investigator

Employment

April 2019 - to date	Research Assistant İzmir Institute of Technology
Education	
Ph.D.	Physics, to date İzmir Institute of Technology, İzmir Advisor: Prof. A. Devrim Güçlü
M.Sc	Physics, August 2019 İzmir Institute of Technology, İzmir Thesis: Disorder induced electronic and magnetic properties of graphene quantum dots Advisor: Prof. A. Devrim Güçlü
B.Sc.	Maths and computers science, June 2014 Eskişehir Osmangazi University, Eskişehir

Awards and Honors

2022	2022 - 16th Nanoscience and Nanotechnology Conference (NANOTR16) - Poster Presentation - 1 st Place
2021	26th Condensed Matter Physics Ankara Meeting (YMF26) - Poster Presentation - 1 st Place

Teaching

Taught courses at İzmir Institute of Technology (in English) **Undergraduate level:** General Physics Laboratory PHYS111 and PHYS 121

Problem solving sessions at İzmir Institute of Technology (in English) Undergraduate level: General Physics, Classical Mechanics, Electromagnetic Theory, Quantum Mechanics

Publication Record

Citations Received : 12

h-index: 1

(Web of Science)

List of Publications

(click on link to access the article)

 Quantum Monte Carlo Study of Semiconductor Artificial Graphene Quantum Nanostructures (link) Gökhan Öztarhan, **E. Bulut Kul**, Emre Okcu, A. D. Güçlü Physical Review B **108**, L161114 (2023)
Electronic and Magnetic Properties of Graphene Quantum Dots with Two charged Vacancies (link) **E. Bulut Kul**, M. Polat, A. D. Güçlü Solid State Communications, **Volume 322**, 114096, (2020)