

Prof. RAŞİT TURAN

Personal Information

Email: turanr@metu.edu.tr

Web: <https://avesis.metu.edu.tr/turanr>

Education Information

Doctorate, Universitetet Í Oslo (University Of Oslo), Fizik Bölümü, Norway 1986 - 1990

Postgraduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Fizik (YI) (Tezli), Turkey 1983 - 1985

Undergraduate, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, Turkey 1978 - 1983

Dissertations

Doctorate, High Concentration Effects of Ge and As in Si, Universitetet Í Oslo (University Of Oslo), Fizik Bölümü, 1991

Postgraduate, Electron Phonon Interactions in Quantum Well Structures, Middle East Technical University, Graduate School of Natural and Applied Sciences, Fizik (YI) (Tezli), 1985

Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, 2010 - Continues

Associate Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, 2006 - 2010

Assistant Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, 1992 - 1996

Research Assistant, Universitetet Í Oslo (University Of Oslo), Matematik Ve Doğa Bilimleri, Fizik, 1987 - 1991

Research Assistant, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, 1983 - 1985

Advising Theses

TURAN R., Expanding the scope of nonparaxial scalar diffraction theory, Doctorate, M.Günöven(Student), 2020

TURAN R., Fabrication of interdigitated back-contact (IBC) solar cells with screen-printed boron doped emitters, Postgraduate, A.Aliiefendioğlu(Student), 2020

TURAN R., Optimization of laser processing for PERC type c-Si solar cells, Postgraduate, E.Genç(Student), 2019

YERÇİ S., TURAN R., A numerical analysis of interdigitated back contacted silicon solar cells, Postgraduate, B.Acar(Student), 2018

TURAN R., Polysilicon thin film processing on glass and photovoltaic applications, Doctorate, M.Karaman(Student), 2016

TURAN R., YERÇİ S., Optical and structural characterization of mixed halide perovskite thin films by thermal co-evaporation, Postgraduate, O.Yılmaz(Student), 2016

TURAN R., YERÇİ S., Non-contact atomic force microscope (ncfm) operation in uhv using radiation pressure excitation of cantilever, Postgraduate, Y.Uysallı(Student), 2016

TURAN R., Novel metal assisted etching technique for enhanced light management in black crystalline SI solar cells /, Doctorate, F.Es(Student), 2015

TURAN R., Fabrication and a complete structural, optical and electrical analysis of porous germanium nanostructures embedded in a dielectric matrix: possibility of third generation solar cell applications, Postgraduate, B.Altuntaş(Student),

2014

ÜNALAN H. E. , TURAN R., Fabrication of silicon nanowires by electroless etching and investigation of their photovoltaic applications, Postgraduate, B.Özdemir(Student), 2011

TURAN R., BEK A., Effect of substrate type on structural and optical properties of metal nanoparticles for plasmonic applications, Postgraduate, İ.Tanyeli(Student), 2011

TURAN R., Si nanocrystals in sic matrix and infrared spectroscopy of in a dielectric matrix, Doctorate, A.Gencer(Student), 2010

TURAN R., Si and si(1-x)ge(x) nanocrystals: synthesis, structural characterization, and simultaneous observation of quantum confined and interface related photoluminescence, Doctorate, N.Asghar(Student), 2010

TURAN R., AKATA KURÇ B., Thickness analysis of thin films by energy dispersive x-ray spectroscopy, Postgraduate, S.Canlı(Student), 2010

TURAN R., Structural and electrical properties of flash memory cells with HfO₂ tunnel oxide and with/without nanocrystals, Postgraduate, D.Şahin(Student), 2009

TURAN R., Synthesizing germanium and silicon nanocrystals embedded in silicon dioxide by magnetron sputtering technique, Postgraduate, A.Sinan(Student), 2007

TURAN R., Growth and characterization of thin sio₂ and ta₂o₅ dielectric layers nd : yag laser oxidation, Doctorate, G.Aygün(Student), 2005

TURAN R., Electrical transport in metal oxide semiconductor capacitors, Postgraduate, M.Arıkan(Student), 2004

TURAN R., Synthesis of silicon-germanium by high dose germanium ion implantation into silicon, Postgraduate, M.Şahin(Student), 1999

TURAN R., Internal photomission spectroscopy for PtSi/Si and Pt/SiGe schottky type infrared detectors, Postgraduate, B.Aslan(Student), 1999

TURAN R., Electrical properties of silicide/silicon diodes, Postgraduate, N.Akman(Student), 1994

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **Spreading resistance modeling for rapid extraction of contact resistivity with a four-point probe**
Turkay D., Tsoi K., Donercark E., TURAN R., YERCI S.
Solar Energy Materials and Solar Cells, vol.230, 2021 (Journal Indexed in SCI Expanded)
- II. **Laser Crystallization of Amorphous Ge Thin Films via a Nanosecond Pulsed Infrared Laser**
Korkut C., Cinar K., Kabacelik I., TURAN R., Kulakci M., BEK A.
CRYSTAL GROWTH & DESIGN, vol.21, no.8, pp.4632-4639, 2021 (Journal Indexed in SCI)
- III. **Effect of amorphous SiC layer on electrical and optical properties of Al/a-SiC/c-Si Schottky diode for optoelectronic applications**
Barbouche M., Benabderrahmane Zaghouni R., Ben Ammar N., Aglieri V., Nasser H., TURAN R., Ezzaouia H.
Journal of Materials Science: Materials in Electronics, vol.32, no.15, pp.20598-20611, 2021 (Journal Indexed in SCI)

Books & Book Chapters

- I. **Characterization of Si Nanocrystals**
YERCI S., DOĞAN İ., SEYHAN A., ARİFE G., TURAN R.
in: Silicon Nanocrystals Fundamentals Synthesis and Applications, Lorenzo Pavesi ve Rasit Turan, Editor, Wiley - VCH, Weinheim, pp.583-611, 2010

Refereed Congress / Symposium Publications in Proceedings

- I. **Structural and optical properties of Al₂O₃ with Si and Ge nanocrystals**
YERCI S., YILDIZ İ., Seyhan A., Kulakci M., Serincan U., Shandalov M., Golan Y., TURAN R.

Supported Projects

TURAN R., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Güneş Enerjisi Araştırma Merkezi (GÜNAM), 2009 - 2011

Patent

TURAN R., Yoğunlaştırıcı Güneş Enerjisi toplayıcıları İçin Dalga Klavuzu ve burada bahsi geçen güneş enerjisi toplayıcısı, Utility patents, CHAPTER H Electricity, Initial Registration, 2015

Tasks In Event Organizations

Demirezen E., Turan R., 2018 International Conference on Photovoltaic Science and Technologies (PVCon), Scientific Congress, Ankara, Turkey, Temmuz 2018

Citations

Total Citations (WOS):2829

h-index (WOS):27