Amiran Bibilashvili
Associate Professo
Condensed Matter Physics

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Education,Scientific Degree,T itle:

- University Diploma in Physics (Solid State Physics), IvaneJavakhishvili Tbilisi State University
- Phys.Math Scientific Doctor in Solid State Physics and Quantum liquids, IvaneJavakhishvili Tbilisi State University
- Associate Professor, Ivane Javakhishvili Tbilisi State University

Teaching Courses:

1) Modern Nanotechnology 2) Physics of semiconductors 3) Micro and Nanoelectro-nics 4)Physics of Dielectrics 5) Modern Electronics and its Components 6)The Induced Processes in Micro and Nanoelectronics 7)Nanotechnology and New Materials 8) Micro and Nanotechnology 9) Molecular Physics 10) Materials in Electronics Techniques 11)Physics of Devices Created for the p-n Transitions 12)Physics of thin Films 13)Surface Physics.

Tutorials

- Semiconductor microelectronics, 416 pp.,Publishing House Tbilisi State University
- Nanotechnology and new materials, 188pp., Publishing House Tbilisi State University
- Dielectrics - Physics, Technology, Application, 195 pp., Publishing House Tbilisi State University

Running projects

- Investigate of Low-Temperature Photon Annealing Mechanisms in Third Group Nitride Nano films; Development of Methods
- Research and Development of Low-Temperature Technologies of Formation of High-Quality Oxides Nano-Layers of Semiconductors
- Research of the Mechanisms of Low-Temperature Pulse Photon Annealing in Micro- and Nano-Structures of Silicon on Insulator, elaboration of the Methods

Research Interests

- Formation semiconductor devices and integral circuits components by low temperature stimulation technology
- Research and developing nanostructures and there application in nanodevices

Selected Publications

1. **A.Bibilashvili,** Z. Kushitashvili, „C-V Measurement of HfO_2 Dielectric Layer Received by UV Stimulated Plasma Anodizing“// Earth and Environmental Sciece**44**(2016) 052008, 6p,IOP Conf. Series;doi:10.1088/1755-1315/44/5/052008;
2. **A.Bibilashvili,** Z. Kushitashvili, „Low Temperature Oxidation of GaAs by UV Stimulated Plasma Anodizing“// Earth and Environmental Sciece**44**(2016) 032002, 5p, IOP Publishing; doi:10.1088/1755-1315/44/3/032002;
3. **A.Bibilashvili**, Z. Kushitashvili,G.Skhiladze, „Electrical, Optical and Structural Properties of Titanium Dioxide Dielectric Films Formed by DC Magnetron Sputtering“//Nano Studies, 2014, v.9, pp.111-114;
4. **A.Bibilashvili**, Z. Jibuti, N.Dolidze,„Study of optical transmission spectra of TiN thin films obtained by the method of high frequency reactive sputtering“//Nano Studies 2013 v.8, pp. 311-314;
5. **A.Bibilashvili**, A.Gerasimov, Z.Kushitashvili, „Plasma Anodizing GaAs, With Application Of Ultra-Violet Irradiation“//New Developments in Materials Science, Nova Science Publishers, Inc. NewYork, 2011, pp. 95-101;
6. A.Tavkhelidze, **A.Bibilashvili,** Jangidze L.,B.Olsen, B.Bilenberg, H.Walitzki, A.Feinerman, „Quantum State Depressions in Thin Metal Films with an Indented Surface“// Russian Microelectronics,2009, Vol. 38, No. 6, pp. 429-433 (Original Russian Text Published in Microelectronica);
7. A.Tavkhelidze, **A.Bibilashvili, L.**Jangidze, B.Billenberg,G.Rempfer, „Quantum Interference depression in thin metal films with nanoseructured surfaces“// J. Nanotechnology Perceptions,2008,v.4, pp.25-28;
8. A.Tavkhelidze,**A.Bibilashvili,** L.Jangidze, A.Shimkunas, P.Mauger,G.F. Rempfer,L.Almaraz, T.Dixon, M.E.Kordesch, N.Katan, H.Walitzki, „Observation of Quan-tum Interference Effect in Solids“// J.Vac.Sci.Technol.B,2008,vol.24, №3,p.1413-1416;
9. N.Lezhava,**A.Bibilashvili,** A.Gerasimov, „Using Intrinsig Gallium Arsenide Oxide for Elements in GaAs-Based Integrated Circuits“// Technical Physics Letters, 2005,v.31,No.1, , pp.75-76;
10. **A.Bibilashvili,** A.Gerasimov, „A Mechanism of Low-Temperature Stimulated Processes in Plasma Anodization of Metals and Semiconductors“//Semiconductors, 2004, Vol. 11, , pp.1263-1266 (Original Russian Text Cop.- Fizika I TekhnikaPoluprovodnikov);
11. **A.Bibilashvili**, A.Gerasimov, M.Vepkhvadze,„Influence of conditions of plasma anodizing of gallium arsenide on properties of their own“// Russian Microelectronics (Original Russian Text Published in Microelektronica 2000,V.29, №2, pp.127-135);
12. **A.Bibilashvili,**A.Gerasimov,R.Kazarov, Z.Samadashvili, „CataliticPlazmaAnodization of Single Cristal 6H-SiC Structures“//Technical Phyz.Letters(Original Russian Text Published 1999,V.25 №15,pp.5-7);
13. A.Gerasimov, G.Chiradze, **A.Bibilashvili**, N.Kutivadze, Z.Bochochadze, „On the distribution of values of hardness depth sample“//Solid State Physics(Original Russian Text Published, 1999,V.41, №7.pp. 1225-1227);
14. A.Gerasimov, G.Chiradze, **A.Bibilashvili**, N.Kutivadze, Z.Bochochadze, „Impact regime formatioThumbprint to assess the magnitude of photomechanical effect“// Solid State Physics(Original RussianText Published, 1998,V.40 ,№3, pp.503-505).

15 patents, with 4 US patents among