

RESUME

SIRENKO Valentyna Anatolievna

Citizenship: Ukraine

Education:

B.S. and M.S. Physics, Low Temperature Physics, Kharkov State University, Kharkov, Ukraine, 1978

Ph.D. in Physics, ILTPE (Institute for Low Temperature Physics & Engineering), National Academy of Sciences of Ukraine

Doctor of Sci., ILTPE, 1999

Networks Application in Physics and Math. Courses, IITAP at Iowa State University, 1998

IWISE Program for Women in Science, IITAP at Iowa State University, 1998, 1999, 2000

Professor 2010

Appointments:

Since 2002 Leading scientist, ILTPE

1999-2002 Senior scientist, ILTPE

Research experience:

Strain distribution, in part in multilayers and cryogenic units; magnetostriction in superconductors and magnets in connection with magnetic field distribution, magneto-optical images processing .

[1] Magnetoelastic and magnetic properties of antiferromagnets and superconductors, - book, ed. Cambridge Scientific Publishers, Cambridge, 2007, 300 p. (in Russian)

[2] Cryogenic Multilayer coatings, - book, ed. Naukova Dumka, Kiev, 1991, 325 p. (in Russian)

[3] Computer-aided design of nitrogen-free helium cryostats. – *Cryogenics* **41**, 549 (2001)

[4] Investigation of magnetic flux gradients in hard superconductors, *Low Temperature Physics*, **27**, 311 (2001);

[5] Magnetostriction of superconductors, *Superlattices & Microstructures*, 1998,

Teaching: under guidance 3 PHD thesis defended

Service:

Guest editor of special issues:

“Low Temperature magnetostriction of magnets and superconductors” of the *Low Temperature Physics J.*, ed. by ILTPE and AIP;

“Low Dimensionality and inhomogeneity effects in quantum matter” to 85-th birthday of V.V. Eremenko of the *Low Temperature Physics J.*, ed. by ILTPE and AIP;

Organization of international conferences:

NATO Advanced Study Institute “Modern trends in magnetostriction study and application”, 2000, Kiev (Ukraine);

NATO Advanced Research Workshop “Low Temperature Quantum Effects: dynamic interactions in technical applications”, 2002, Warsaw, Poland.;

NATO Advanced Research Workshop “Smart Materials for Ranging Systems”, 2004, Krasnoyarsk, Russia;

Languages: Ukrainian, Russian, English, Polish, French.

Awards 2004 NASU Ukraine Shubnikov prize winner

Recent publications:

1. Effect of step-edge on spectral properties and planar stability of metallic bigraphene / Eremenko V.V, Sirenko V.A., Gospodarev I.A., Syrkin E.S. , Feodosyev S.B., Bondar I.S., Saxena S.S., Feher A., Minakova K.A. // ФНТ. – 2016. Т.42, №2. – С. 134-141 [Low Temp.Phys. - 2016. T42, №2. – С.99].
2. Anisotropic behavior and inhomogeneity of atomic local densities of states in graphene with vacancy groups / Eremenko V., Sirenko V, Gospodarev I, Syrkin E., Feodosyev S., Bondar I., Minakova K. // Journal of Science: Advanced Materials and Devices. – 2016. V.1, №1. – P. 1-7.
3. Роль акустических фононов в отрицательном тепловом расширении слоистых структур и нанотрубок на их основе / Еременко В.В., Сиренко А.Ф., Сиренко В.А., Долбин А.В., Господарев И.А., Сыркин Е.С., Феодосьев С.Б. , Бондарь И.С., Минакова К.А. // ФНТ. – 2016. Т.42, №5. – С. 513-525.
4. The phonon mediated anomalies of thermal expansion in transition-metal compounds and emergent nanostructures / Eremenko V., Sirenko V, Dolbin A., Feodosyev S., Gospodarev I., Syrkin E., Bondar I., Minakova K. //Solid State Phenomena. – 2017. V.257, №1. – P. 81-85.
5. Электронные и фононные состояния, локализованные вблизи границы графена / В.В. Еременко, В.А. Сиренко, И.А. Господарев, Е.С. Сыркин, С.Б. Феодосьев, И.С. Бондарь, А. Feher, К.А. Минакова // ФНТ. – 2017. Т.43, №11. – С. 1657-1668.
6. Комби-криостат для рентгеновского дифрактометра / И.С. Бондарь, В.И. Пинегин, В.В. Рябовол, В.А. Сиренко, В.В. Еременко // ФНТ. – 2017. Т.43, №12. – С. 1796.
7. Antiferromagnet-ferromagnet transition in $\text{La}_{1-x}\text{Sr}_x\text{Mn}_{0.5}\text{Ni}_{0.5}\text{O}_3$ ($0 \leq x \leq 0.2$) ceramics / Troyanchuk I.O., Karpinsky D.V., Bushinsky M.V., Sirenko V.A., Sikolenko V.V., Franz A. // ФНТ. – 2017. Т.43, №8. – С. 1219-1223.
8. Магнитные свойства мультиферроиков $\text{Bi}_{1-x}\text{Ca}_x\text{Fe}_{1-x}\text{Mn}_x\text{O}_3$ и $\text{Bi}_{1-x}\text{Ca}_x\text{Fe}_{1-x}\text{Ti}_x\text{O}_3$ / Троянчук И.О. , Бушинский М.В. , Чобот А.Н. , Мангыцкая О.С., Терешко Н.В. , Чобот Г.М. , Сиренко В.А., Еременко В.В. // ФНТ. – 2016. Т.42, №12. – С. 1462-1437.
9. Природа магнитного состояния слабо анионизбыточного манганита $\text{LaMnO}_3+\delta$ / Пашенко В.А., Галетич И.К., Сиренко В.А., Еременко В.В., Еременко А.В., Брук В.В. // ФНТ. – 2017. Т.43, №11. – С. 1634 – 1641.