

## Curriculum Vitae of Irina V. Antonova

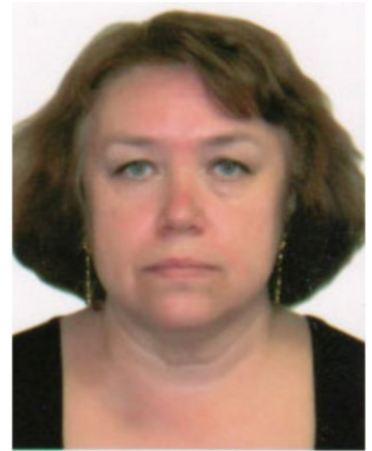
**Date of Birth:** 26.06.1957

**Education:**

1979, Department of Physics and Engineering, Novosibirsk Institute of Electrical Engineering.

1990, Candidate of Sciences (Ph. D.) in Semiconductor Physics. Thesis "Investigation of inhomogeneous distribution of the defects and impurities in silicon"

2009, Doctor of Sciences in Semiconductor physics. Thesis "Localized states in Si based heterosystems formed in deformation fields"



**Work Experience:**

1979-1981 – the researcher, Institute of physics and chemistry of mineral materials, Novosibirsk.

1981-1985 – the post-graduate student in Institute of Semiconductor Physics, Novosibirsk;

1985-2004 – the scientific researcher, senior researcher, leading researcher in laboratory of radiation physics of semiconductors, Institute of Semiconductor Physics, Novosibirsk.

2004-present – the leading researcher in laboratory of three-dimensional nanostructures, Institute of Semiconductor Physics, Novosibirsk.

**Current Research and Professional Interests:**

Graphene-based heterostructures, chemical functionalization of graphene and fabrication of graphene-based hybrid structures, transport and recharging phenomena in nanocomposite layers (such as Si nanocrystals in dielectric matrix), and localized states in heterostructures (silicon-on-insulator, Si/SiGe/Si with quantum wells and quantum dots), high-pressure-related effects in semiconductors and heterostructures, quantum confinement levels in quantum wells and quantum dots, and surface passivation phenomena in semiconductors covered with organic monolayers.

Presently, Prof. Dr. I.V. Antonova has more than 240 works published in leading, high-cited scientific journals and conference proceedings. Sum of the times cited is about 1120, h-index is equal to 13.

**Selected Publications:**

1. I.V. Antonova, N.A. Nebogatikova, V.Ya. Prinz, Chemical functionalization as an approach for the creation of arrays of graphene quantum dots embedded in dielectric matrix, book "Chemical Functionalization of Carbon Nanomaterials: Chemistry and Applications". CRC Press, Taylor & Francis Group, ISBN 9781482253948, 976 Pages, Eds V.K.Thakur, M.K. Thakur, pp 430-453 2015.
2. N.A. Nebogatikova, I.V. Antonova, V.Ya. Prinz, I.I. Kurkina, G.N. Aleksandrov, V.B. Timofeev, S.A. Smagulova, E.R. Zakirov, V.G. Kesler, Fluorinated graphene dielectric films obtained from functionalized graphene suspension: preparation and properties, Physical Chemistry Chemical Physics, 2015, **17**, 13257 - 13266
3. N.A. Nebogatikova, I.V. Antonova, V.Ya. Prinz, V.B. Timofeev, S.A. Smagulova, Graphene quantum dots in fluorographene matrix formed by means of chemical functionalization, Carbon, 77, 1095-1103, 2014.
4. I.V. Antonova, N.A. Nebogatikova, V.Ya. Prinz, Self-organized arrays of graphene and few-layer graphene quantum dots in fluorographene matrix: formation of quantum dots and charge spectroscopy, Appl. Phys. Lett. 104 (19), 193108(5), 2014.
5. Tunable Properties of Few Layer Graphene - N-methylpyrrolidone Hybrid Structures I.V. Antonova, I.A. Kotin, R.A. Soots, V.A. Volodin, V.Ya. Prinz Nanotechnology, 23, 315601, 2012.