Ioffe Institute
for Japan-Russian cooperation

Andrei G. Zabrodskii,

Professor, Director

www.ioffe.ru

Japan-Russian
Forum for Investments
St Petersburg • September 6-8, 2006

Ioffe Institute

Ioffe Institute

Institute's structure

Staff: 1000 researchers, including 250 Doctors and 650 Candidates of Sciences

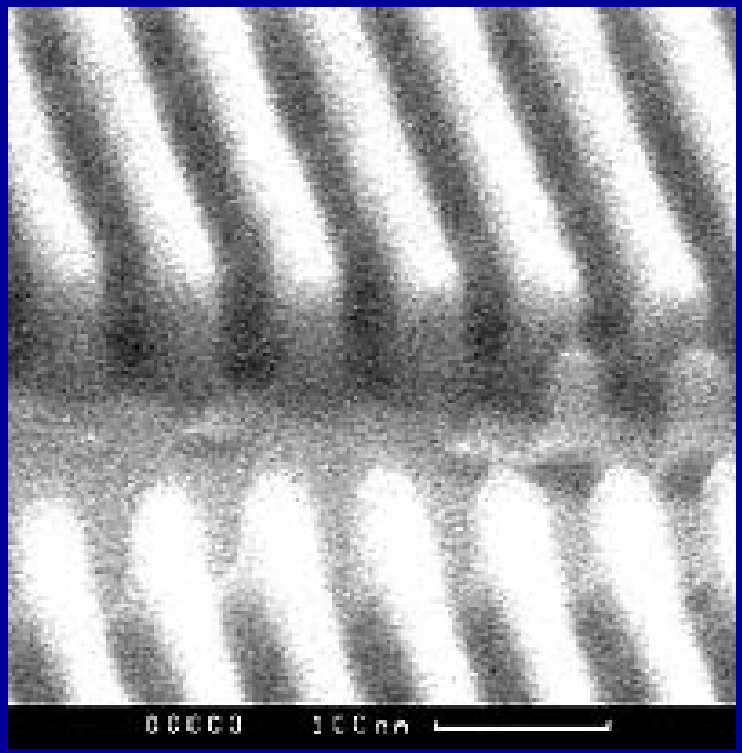
5 divisions:

- Division of plasma physics, atomic physics and astrophysics
- Division of solid-state physics
- Division of physics of dielectric and semiconductors
- Division of solid-state electronics
- Centre of nanoheterostructure physics

ISTC projects

International Science and Technological Center (ISTC):

- **R&D Nanolithography Tools and Materials**
- **R&D New Effective Thermoelectric Material**



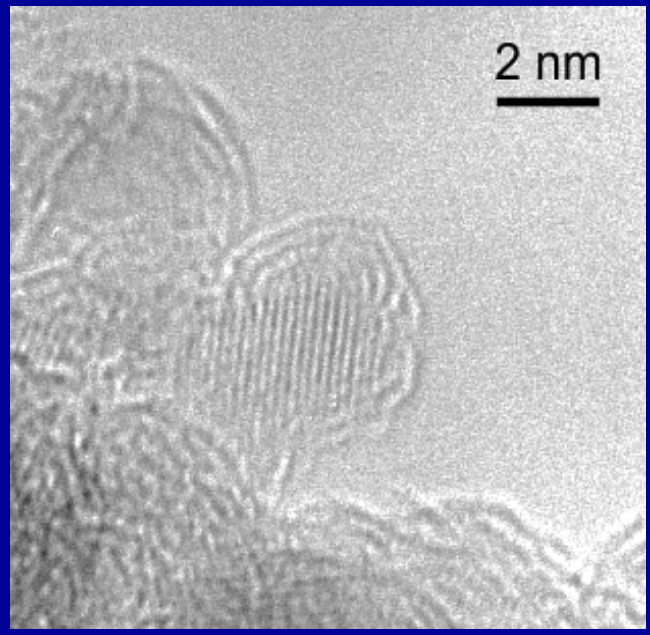
Result of EUV nanolithography

ISTC Project 0991
Development and creation of EUV nanolithography tools and materials

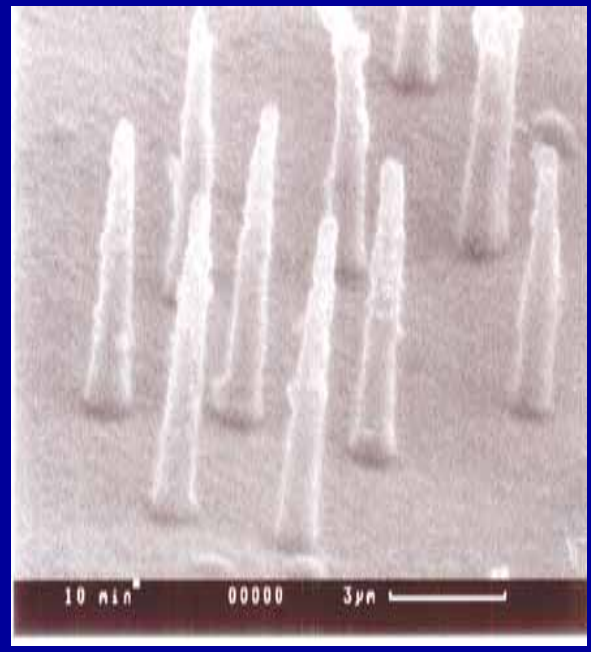
NEDO project

New Energy and Industrial Development Organization (NEDO):

- **R&D on Novel Nano/Submicron Carbon Particles: Buckyonions and Buckydiamonds**



TEM Image of nanodiamond powder, mean size of diamond core is ca 40 angstroms.



SEM image of nickel tips array obtained by ion-track membrane method

Ioffe Institute proposes

- To organize joint Japanese-Russian laboratory for High technology for North-West region

Ioffe Institute will provide

- Location of the Lab in a special economical zone
- High level experts in the field of nanotechnology
- Results of R&D for applications
- Promotion of modern Japanese experimental set-ups

Ioffe Institute is interested in

- Investments for industrial applications
- Modern Japanese experimental set-ups

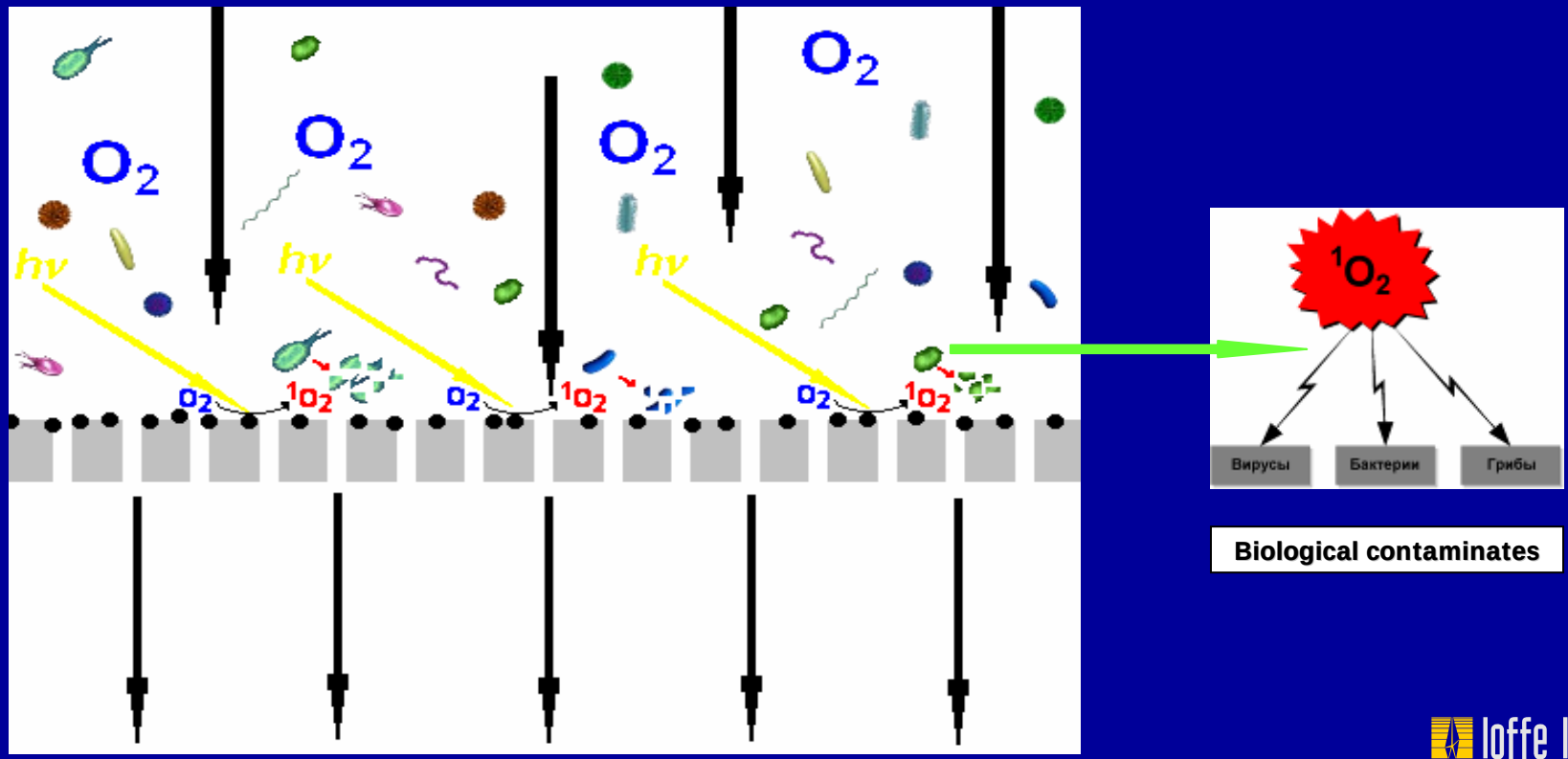
Mid-Infrared (1600-5000 nm) optoelectronics for Gas analyzing and medical diagnostics

Light Emitting Diodes
Photodiodes
Laser Diodes

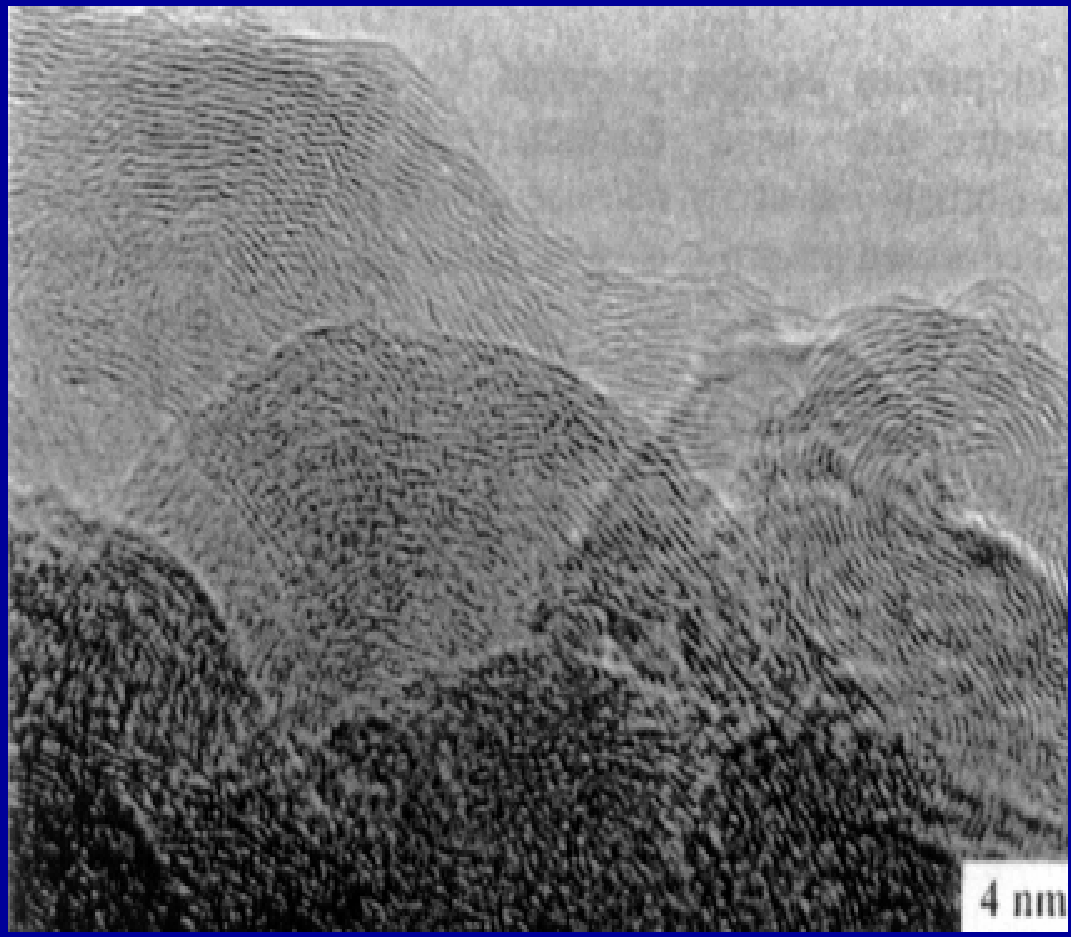
LED–PD optopairs for portable sensors (CH_4 , H_2O, CO_2, CO, C_2H_2, C_2H_4, C_2H_6, CH_3Cl, OCS, HCl, HOCl, HBr, H_2S, HCN, NH_3 , NO_2 , SO_2) glucose and many others gases and liquides.

Composite membrane for medical application

- Ioffe Institute
- Federal Interprise Institute of Synthetic Rubber
- Institute of Experimental Medicine
- Institute of Influenza



Nanoporous carbon for Hydrogen storage



TEM image of nonporous carbon produceв form SiC by chlorination method. Specific surface is about 1000 m^2/g

Ioffe Institute proposes

To organize joint Japanese-Russian workshop
"High technology for investments" in 2008

Welcome to cooperation!

Thank you for your attention!

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