

## **Short Curriculum vitae**

**Irena Gotman**

**Identification number:** 01553278-1

**Date and place of birth:** March 19, 1957, St. Petersburg (Leningrad), Russia

**Immigrated to Israel:** November 20, 1983

**Marital status:** Married, 3 children

### **ACADEMIC DEGREES**

1992 D.Sc., Materials Science, Dept. of Materials Engineering, Technion - Israel Institute of Technology, Haifa, Israel

1987 M.Sc., Materials Science, Dept. of Materials Engineering, Technion - Israel Institute of Technology, Haifa, Israel

1980 M.Sc., Metallurgy, Faculty of Physical Metallurgy, Leningrad Polytechnic Institute, St. Petersburg (Leningrad), Russia

### **ACADEMIC APPOINTMENTS**

2009-2010 Adjunct Professor, Department of Biomedical Engineering, Tel-Aviv University

2001-present Senior Research Fellow, Dept. of Materials Engineering, Technion, Haifa, Israel

2001-present Senior Teaching Fellow (Adjunct), Dept. of Materials Engineering, Technion, Haifa, Israel

1997-2001 Senior Research Associate, Dept. of Materials Engineering, Technion, Haifa, Israel

1995-1997 Levi Eshkol Post-Doctoral Fellow, Dept. of Materials Engineering, Technion, Haifa, Israel

1994-1995 Post-doctoral Research Fellow, Dept. of Materials Engineering, Drexel University, Philadelphia, PA, USA

1992-1994 Fulbright Post-doctoral Research Fellow, Dept. of Materials Engineering, Drexel University, Philadelphia, PA, USA

1993-1995 Adjunct Assistant Professor, Dept. of Materials Engineering, Drexel University, Philadelphia, PA, USA

1992 Research Associate, Dept. of Materials Engineering, Technion, Haifa, Israel

- 1991-1992 Senior Research Assistant, Dept. of Materials Engineering, Technion, Haifa, Israel
- 1987-1991 Instructor, Ph.D. Student, Dept. of Materials Engineering, Technion, Haifa, Israel
- 1984-1987 Teaching Assistant, M.Sc. Student, Dept. of Materials Engineering, Technion, Haifa, Israel

### **PROFESSIONAL EXPERIENCE**

- 1980-1983 Research Assistant, Welding Department, Machine Building Research Institute, St. Petersburg (Leningrad), Russia

### **RESEARCH INTERESTS**

Biomaterials: design and processing of metal alloys, ceramics and composites for joint replacements, orthopaedic devices and dental implants;

load-bearing bone graft substitutes: 3D macroporous metal structures, dense and porous ceramic-polymer nanocomposites;

surface modification of medical devices towards improved wear and corrosion resistance, enhanced biocompatibility and acquired cell-attachment capability;

Processing and manufacturing of micron and nano-scale composites: reactive processing, pressure-assisted Self-propagating High-temperature Synthesis (SHS) of ceramic, metal and intermetallic matrix composites, microstructure characterization and mechanical properties; high pressure consolidation of powders;

Surface engineering: processing and characterization of reactive diffusion coatings on metals, ceramics and carbon/carbon composites;

Solid state and solid-liquid reactions: interfacial reactions, reactive diffusion.