Brief Curriculum Vitae of Professor Hidenori Mimura
Director of the Research Institute of Electronics,
Shizuoka University, Hamamatsu, Japan

Surname : Mimura
First Name : Hidenori
Date of Birth : August 25, 1956
Place of Birth : Shizuoka, Japan
Nationality : Japan
Sex : Male
Profession : Physicist
Affiliation : Research Institute of Electronics, Shizuoka University
Position/Degree : Professor and Director of Research Institute of Electronics, Shizuoka University /Dr. Engineering
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Education

April, 1975 – March, 1979 Department of Electronics, Faculty of Engineering, Shizuoka Univ.
April, 1979 – March, 1981 Department of Electronics, Graduate School of Engineering, Shizuoka Univ.
April, 1984 – March, 1987 Graduate School of Electronic Science and Technology, Shizuoka Univ.
Doctor of Engineering

Scientific Employment

April, 1981--March, 1984 Research Associate, Faculty of Engineering, Shizuoka Univ.
April, 1987 Senior Researcher, Nippon Steel Corporation
April, 1994 Senior Researcher, Advanced Telecommunication Research Institute
April, 1996 Associate Professor, Research Institute of Electrical Communication, Tohoku Univ.
April, 2003-March, 2004 Professor, Research Institute of Electrical Communication, Tohoku Univ.
April, 2003-present, Professor, Research Institute of Electronics, Shizuoka Univ.
April, 2006-present, Director, Research Institute of Electronics, Shizuoka Univ.

Scientific Specialization

Nanotechnology, Imaging Science, Vacuum Nanoelectronics

Activities at societies etc.

* International Steering Committee, International Vacuum Nanoelectronics
* Advisory Editor, Microelectronic Engineering, Elsevier
* Chairman, JSPS 158th Committee on Vacuum Nanoelectronics
* Editor, IEEE Electron Device Letters

Main achievements

1) Dr. Mimura is one of the most active researchers in vacuum nanoelectronics. Vacuum nanoelectronics uses micro-field emitter arrays (FEAs). The most serious problems of FEAs are the fluctuation of emission current and spatially divergence of the emitted electron beam. Dr. Mimura solved these two serious problems of FEAs. He developed FEAs monolithically fabricated with a field effect transistor in series at 1996. He completely suppressed the fluctuation of emission current by using the field effect transistor as a

constant current source for FEAs. Dr. Mimura also developed novel volcano-structured double-gated FEAs at 2008. He demonstrated the excellent focusing characteristics of the emitted electron beam without decreases of the emission current for the novel volcano-structured double-gated FEAs. He also developed various devices using FEAs such as X-ray tubes, ramps, image sensors, microwave devices. Recently, he is developing radiation tolerant vacuum image sensors and THz travelling wave tubes using FEAs.

2) Dr. Mimura developed novel image sensors using amorphous - crystalline silicon heterojunctions.
3) Dr. Mimura developed porous Si LEDs with blue, green and red colors.
4) Dr. Mimura discovered current self-oscillations in photoexcited type-II GaAs-AlAs superlattices.
5) Dr. Mimura developed THz detector using semi-insulating GaAs and InP.
6) Dr. Mimura developed a photon counting type X-ray detector using CdTe pn junction.
7) Dr. Mimura developed a drawable CNT using chloride mediated chemical vapor deposition.
8) Dr. Mimura developed a novel strain sensor using CNT sheets.

Total number of journal papers: 232.