

History / Achievement

1989-1993

1989

- Growth of Vertical Superlattice and its Application to New Quantum-Wire Transistors
- Development of Super High Speed GaAs IC for 10 Gb/s Optical Telecommunications using SAINT Technology
- World-first Introduction of Miniature SOR Device using Superconducting Magnets
- Fiber Optical Amplifiers
- Establishment of in-situ Observation(SPA) using Light for Crystal Growth
- Confirmation of Emission Controlled Semiconductor Laser Principle
- Observation of Atomic Layer Growth Process
- Development of Single-Mode Fiber Optical Connectors



1990

- Development of Ballistic Carrier Transistor with Launcher (L-BCT)
- Discovery of Public Key Crypto System based on Elliptical Curves
- Planar shaped Silicon Macromolecule Synthesis and Observation of Visible Light Emission
- Discovery of Ultrafine Compositional Separation Structure of Co-Cr Alloy Magnetic Thin Film
- Development of PLC Components for 100-Wave-Multiplexing FDM Optical Transmission
- Development of Rewritable Phase Conversion Optical Disks

1991

- [Establishment of Communication Science Laboratories]
- Completion of SOR Lithography System for VLSI Development
- Successful Fabrication of Resonance Tunneling Transistors
- Development of Optical Nonlinear Macromolecule Material (For Super High-Speed Optical Switching)
- Generation of Femto Second Pulses in the Surface-Emission Laser
- Successful Quantum Non-demolish Measurement of Photons
- Successful Synthesis of New Silicon Materials
- Fabrication of Surface-Emission Optical Switch Array (EARS)



1992

- Development of Surface-Emission Optical Switch Array (EARS)
- Realization of Spontaneous Light Emission controlled Diode
- Measurement of Cerebral Left-Right Hemisphere Difference using Magnetoencephalograms
- Successful Flow of Superconducting Current in HEMT
- Discovery of New Oxide Superconductors including Carbonic Acid
- Zero-Gravity Crystal Growth Experiment in Space Shuttle Endeavor
- Isodistortion Principle and Optimal Vector Quantization Method
- Development of 1.3μm-Band Optical Fiber Amplifier



1993

- [Basic Research Laboratories Start to move to Atsugi]
- Development of Search Algorithm using Best-First Method
- Establishment of 0.2 μ m-Level LSI Basic Technology
- Discovery of Gravitational Lens Illusion
- Recognition of Three Dimensional Objects using Parametric Eigen Space Method
- Discovery of Ultra High Sensitivity Molecular Detection Technology
- Synthesis of Spiral Silicon Macromolecule
- High Speed Solution of Scheduling Problem
- Development of PARTHENON
- Simplification Technology of Logic Circuit
- Commercial use of MU Type Optical Connector
- Discovery of Self-organization Phenomenon in Distorted Quantum Well Disk Structure

