## Department of Quantum Electronic Device Engineering,

Division of Electrical, Electronic and Information Engineering, Graduate School of Engineering Ito Laboratory (Fundamental Process Area for Functionalizing, Electronics Materials Engineering)

## Researches

- O Growth and characterization of high-quality semiconducting (p-type, n-type and undoped) diamond films, heavily-doped metallic diamond and self-standing films fabricated using high-power-density microwave-plasma chemical-vapordeposition (CVD) method which can lead to reasonable growth rates.
- $\bigcirc$  Development of high-performance diamond detectors for deep ultra-violet lights, X-rays and  $\gamma$ -rays, as well as characterization of device performances
- O Development of fabrication processes of diamond electronic devices including power electronics devices by using functionalized high-quality CVD diamond films
- ODevelopment of new-type microwave CVD apparatus
- OFabrication and characterization of carbon thin films using CVD processes
- ODevelopment and characterization of functionalized devices fabricated with oxides and perovskite materials

## Staff

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