High-voltage and plasma applications for agriculture and food safety

Lightning Agriculture

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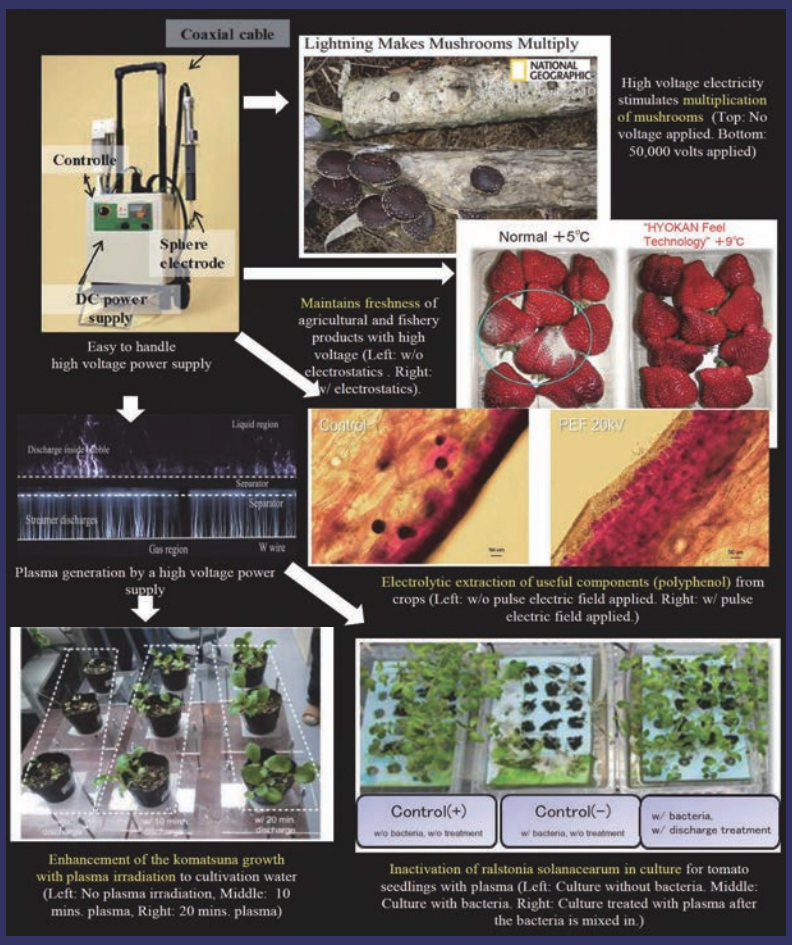
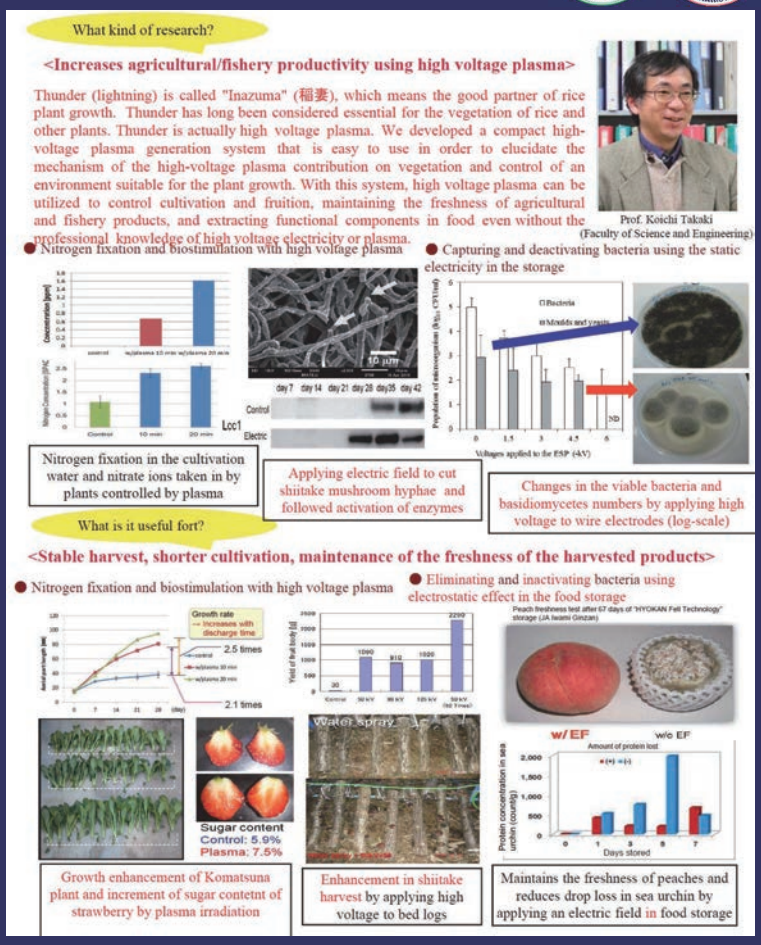
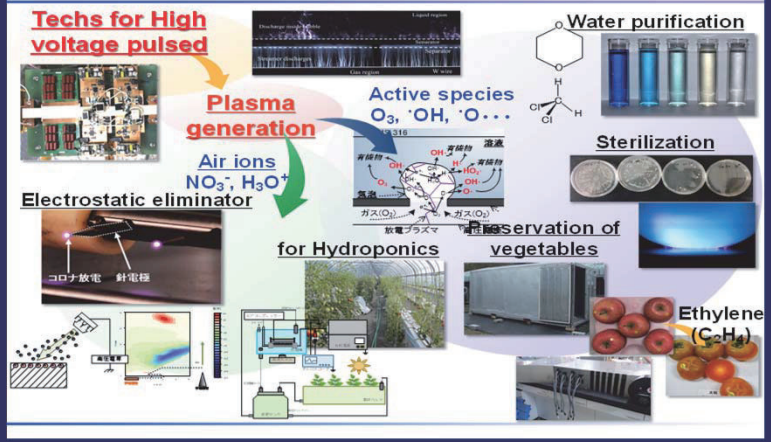
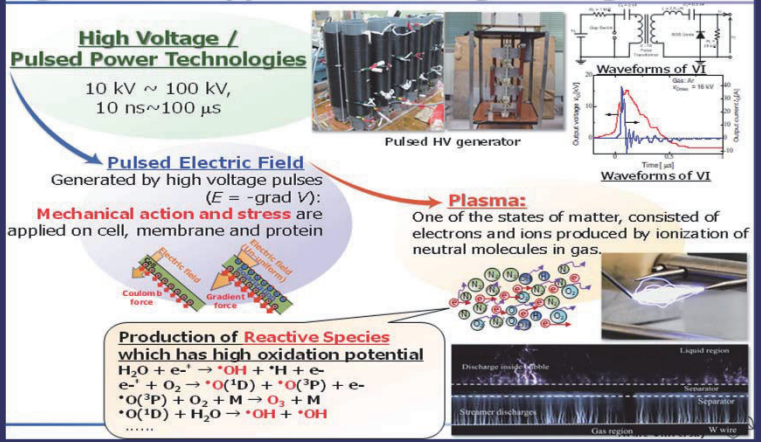




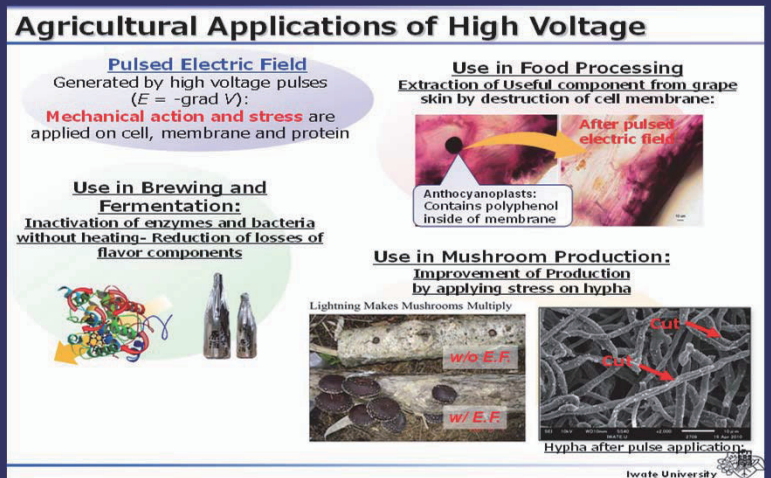
How is "Plasma" used in our research



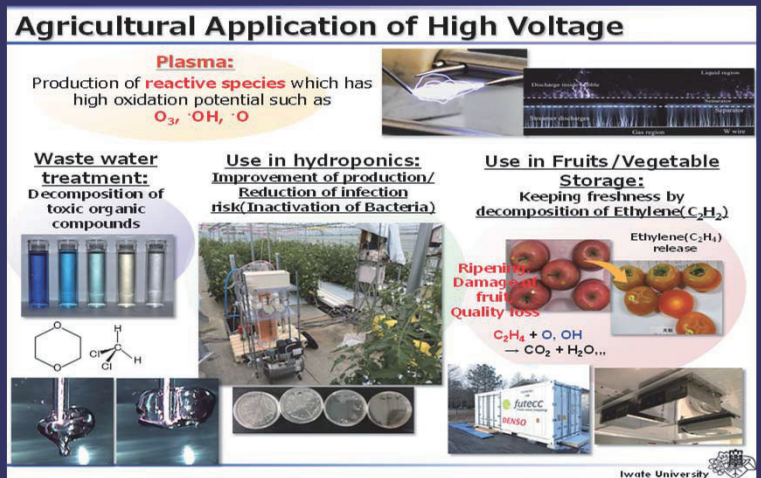
Agricultural Applications of High Voltage



Agricultural Applications of High Voltage



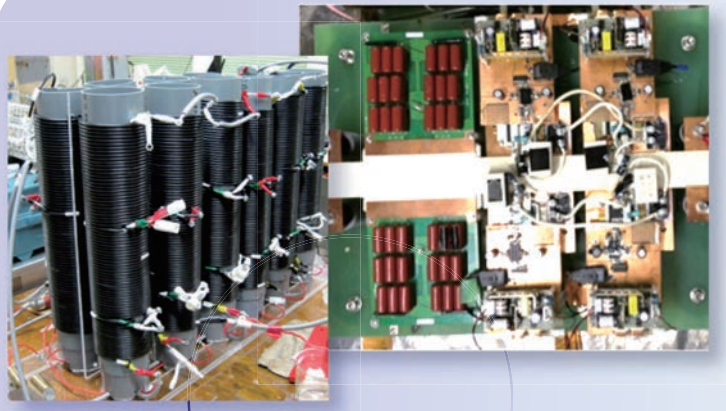
Agricultural Application of High Voltage



Plasma/Pulsed Power Lab.

We have studied the funamental characteristics and applications of high voltage pulsed power sytem and plasma discharge.

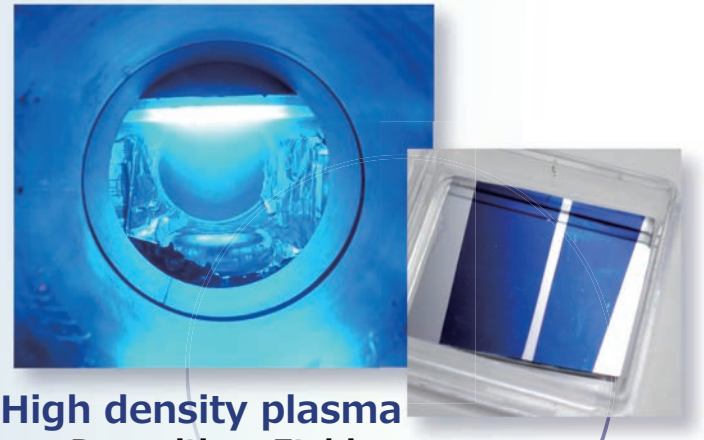
Prof. Koichi Takaki
Dr. Katsuyuki Takahashi



High voltage pulsed power system

Generating plasma, Ion accelerator

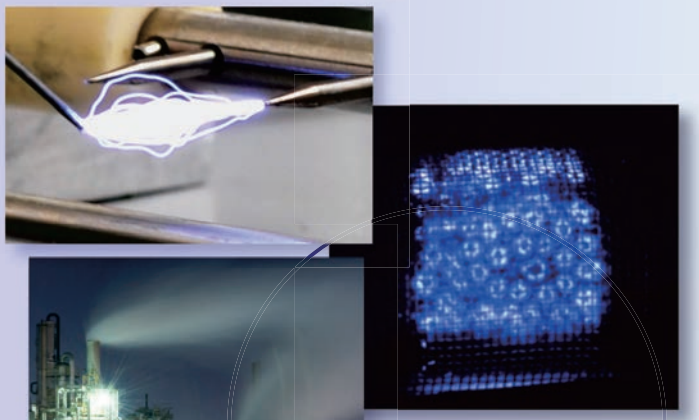
Developent of nanosecond pulse generator
Evaluation of SiC devices
Application to acceleror



High density plasma

Deposition, Etching

Evaluation of fim propaties
Improvemnt of deposition rate
Development of high density plasma source
Diagnosis of plasma



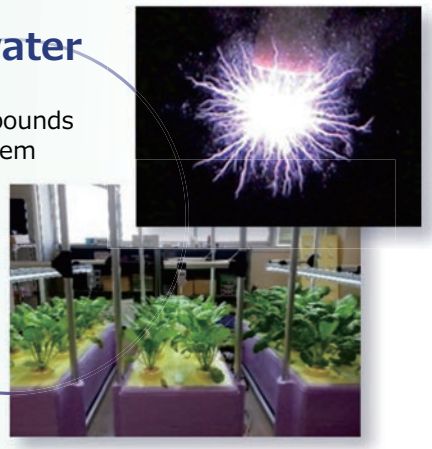
Plasma in water

Water remediation

Decomposition of organic compounds
Development of treatment system

Hydroponic culture

Reduction of infection risk
Sterilization
Nutrient supply by plasma
Pilot trial on farm



Atmoshperic plasma

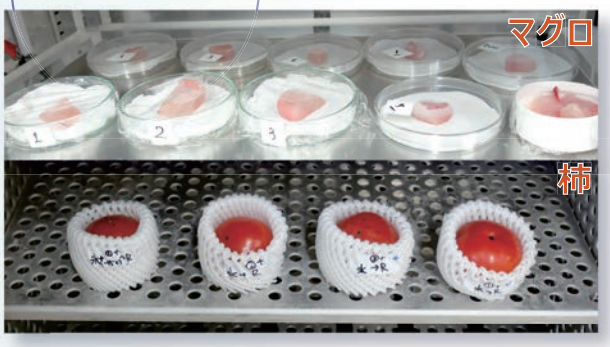
Gas treatment, ion generating

Treatment of exhaust gases (NOx)
Removal of ethlylene released by fruits
Combined system of catalyst
Develoment of electrostatic eliminator

High electric field

Keeping freshness of marine and agricultural products

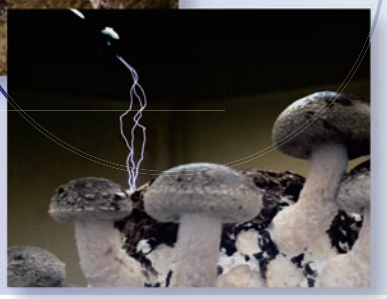
Evaluation of confrmational change of protein



Artificial lightning

Stimulation for mushroom cultivation

Improvement of yield
Elucidation of mechanism based on enzyme expression



Science events

Science events for children
Development of educational materials