

# KAMBARA Lab. HISTORY OF RESEARCH

Ver.2014

## Coal Utilization

1986-1993

NO<sub>x</sub> formation mechanisms in pulverized coal combustion

1991-

Coal quality evaluation system (C-Quens) for PC power plants

1998-2012

Trace element emissions from pulverized coal power plants

2008-2009

Coal quality evaluation system (C-Quens) for coal gasification

2011-2012

Low rank coal utilization for existence PC boilers.

2013-

Control of trace element leachates from coal fly ashes

## Plasma Application

2000-

Low temperature SNCR for combustors

2008-2011

Decomposition of N<sub>2</sub>O

2010-

Hydrogen production

2011-

Oxidation and removal of elemental mercury in gas phase

## UV Irradiation

2008-2012

Low temperature SNCR for combustors

2010-

Ammonia decomposition by various wavelength

2013-

Room temperature DeNO<sub>x</sub> without ammonia agent

2011-

Surface modification and MPC polymer coating

2013-

Surface cleaning for window glass of vehicles

Mechanisms of atomic layer deposition of nitrogen

## Energy System

2014-

Ammonia synthesis at low temperature and atmospheric pressure

2013-

Thermal managements of 18650 Li-ion battery

2014-

Advanced hydrogen energy system using ammonia carriers