

KONA Award -2022

**Professor Hidehiro Kamiya, PhD
(Tokyo University of Agriculture and Technology, JAPAN)**



Education

B.S. (Chemical Engineering), Nagoya University (1981)

Dr. Eng. (Chemical Engineering), Nagoya University (1986)

Career

2019 – Present:

— **Vice President**, Tokyo University of Agriculture and Technology

2013- 2018:

— **Dean**, BASE, Tokyo University of Agriculture and Technology,

2003 – Present:

— **Professor**, Tokyo University of Agriculture and Technology (Graduate School of Bio-Applications and Systems Engineering, BASE)

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Application 1

Nano- and fine particles powder process design

for

- / Fine ceramics
- / **Composite**, nanoparticles dispersed polymers
- / Lithium ion battery electrode

Application 2

Energy and environment

Ash behavior control at high temperature, dust collection coal, biomass, waste power generation plant

- / **PM 2.5**, Nanoparticle emission, ISO standard
- / Nano risk, Nano toxicity

Application 3

Pharmaceutical / DDS, Inhalation

Oral administration using microcapsule
Orally disintegrating tablet

Life and other application

- / Cosmetic powder
- / Toner for dry copy, ink jet

Food and Energy system

Agriculture + Engineering

Fundamentals : Characterization and control of **adhesion, aggregation / dispersion, and packing** behavior by using interface molecular and nanometer scaled structure design

- / Development of new characterization method, such as colloidal probe AFM method and NMR,
- / Molecular design of ligand for nanoparticle dispersion, nanoparticles coating on fine particles.



Particle adhesion and aggregation behavior characterization and control.