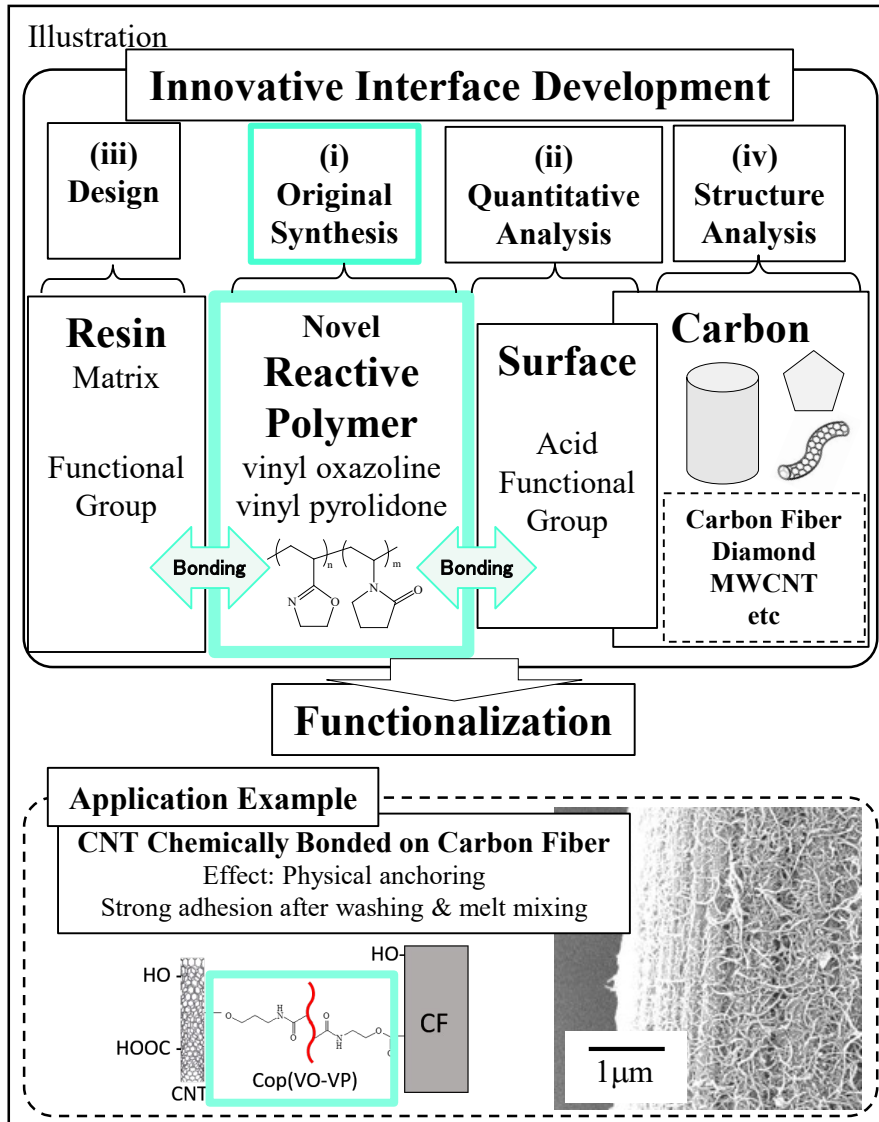


# Innovative Interface for Carbon/Polymer Composite Based on Molecular Design

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Content:

Carbon fiber/polymer composite have recently received considerable attention from thick shoe sole to airplane. Diamond, which is considered as the hardest materials in the world, has been utilized for grinding, from silicon solar panel to 5G semi conductor and supports all industrial base for grinding of hard materials.

As carbon materials, we use **carbon fiber**, **diamond**, and **carbon nanotube** etc. **Development of innovative interface based on molecular design** for these carbon/polymer composites has been performed from fundamental science to industrial applications.

Concretely describing, (i) **The new polymer based on highly reactive oxazoline has been originally designed and synthesized.** (ii) **Quantitative analysis of surface acid groups** of carbon has conducted. (iii) Functional groups of resin matrix has been designed. (iv) Structure analysis of carbon materials have been carried out.

Appealing point:

We have great interest for active international R&D collaboration from fundamental interfacial science to its industrial application.

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