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## Full Length Article

Interactions between ZnO nanoparticles and amorphous g-C<sub>3</sub>N<sub>4</sub> nanosheets in thermal formation of g-C<sub>3</sub>N<sub>4</sub>/ZnO composite materials: The annealing temperature effect

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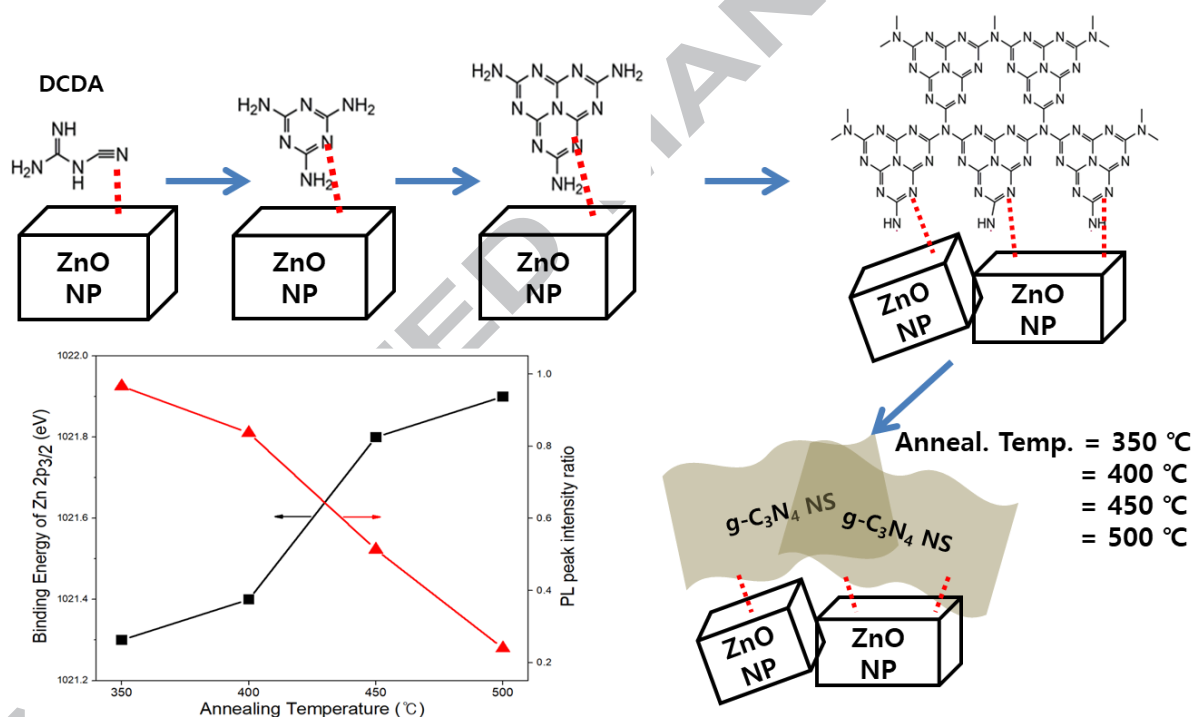
# Interactions between ZnO nanoparticles and amorphous g-C<sub>3</sub>N<sub>4</sub> nanosheets in thermal formation of g-C<sub>3</sub>N<sub>4</sub>/ZnO composite materials:

## The annealing temperature effect

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### Graphical Abstract



### Highlights

- g-C<sub>3</sub>N<sub>4</sub>/ZnO composite materials were prepared at various annealing temperatures
- Non-crystalline g-C<sub>3</sub>N<sub>4</sub> nanosheets were formed from DCDA over ZnO nanoparticles
- The strong interaction between ZnO and g-C<sub>3</sub>N<sub>4</sub> decreased the electron density of ZnO
- The g-C<sub>3</sub>N<sub>4</sub>/ZnO composite prepared at 500 °C showed the slowest recombination rate

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