

## **Application of nano carbon materials on producing metal matrix composites**

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In recent years, nano carbon materials such as carbon nanotubes and graphene nanoplatelets have become popular as reinforcement material for metal matrix composites due to their unique mechanical and physical properties. In this study, aluminum matrix composites containing carbon nanotubes were produced via semi

powder metallurgy. Aluminum and carbon nanotubes powders were compacted in graphite mold at 600 °C with a 50 Mpa pressure in hot-press system. Also, all specimens were sintered at 600 °C at for 1 hour. Hardness tests were performed to understand mechanical effect of CNTs on aluminum. Corrosion tests were also carried out by electrochemical and immersion analysis. Results show that mechanical performances of aluminum were improved with the addition of CNT. However, CNT accelerates the corrosion rate of aluminum.

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