

### Microwave treatment of pitch based coke

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Recently, cases of microwave heating of carbon materials were widely reported. Nevertheless, there is no report about full-graphitization using microwaves. We tried full-graphitization of pitch-based carbon powder (THFS) using microwaves. Interlayer spacing of THFS was changed from 3.4716Å to 3.4299Å after microwave irradiation (2.45GHz, 1500W, 30min). By adding nickel chloride into THFS using simple impregnation method followed by the same microwave irradiation, full-graphitization was achieved. 6mmol NiCl<sub>2</sub> impregnated THFS shows 3.3860Å of d-spacing which is similar to the value of the heat treated THFS (2600°C, 1h). IG/ID ratio (Intensity ratio between G and D-band) increased about 8 times from 1 to 7.9. Structural change was also observed by TEM analysis.