Supplementary information

Establishment of innovative carbon nanofiber synthesis technology utilizing carbon dioxide

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This supporting information contains 6 figures in 7 pages.



Fig. S1 SEM micrographs of CNFs prepared with different temperature in the condition of 0% CO₂ by using Fe catalysis. (a) 470 °C, (b) 500 °C, (c) 530 °C, (d) 560 °C, (e) 590 °C



Fig. S2 SEM micrographs of CNFs prepared with different temperature in the condition of 50% CO₂ by using Fe catalysis. (a) 470 °C, (b) 500 °C, (c) 530 °C, (d) 560 °C, (e) 590 °C, (e) 620 °C.



Fig. S3 SEM micrographs of CNFs prepared with different temperature in the condition of 0% CO₂ by using Ni catalysis. (a) 470 °C, (b) 500 °C, (c) 530 °C, (d) 560 °C, (e) 590 °C, (e) 620 °C.



Fig. S4 SEM micrographs of CNFs prepared with different temperature in the condition of 50% CO₂ by using Ni catalysis. (a) 470 $^{\circ}$ C, (b) 500 $^{\circ}$ C, (c) 530 $^{\circ}$ C, (d) 560 $^{\circ}$ C, (e) 590 $^{\circ}$ C, (e) 620 $^{\circ}$ C.



Fig. S5 SEM micrographs of CNFs prepared with different temperature in the condition of 0% CO₂ by using Co catalysis. (a) 470 °C, (b) 500 °C, (c) 530 °C, (d) 560 °C, (e) 590 °C, (e) 620 °C.



Fig. S6 SEM micrographs of CNFs prepared with different temperature in the condition of 50% CO₂ by using Co catalysis. (a) 470 °C, (b) 500 °C, (c) 530 °C, (d) 560 °C, (e) 590 °C, (e) 620 °C.