

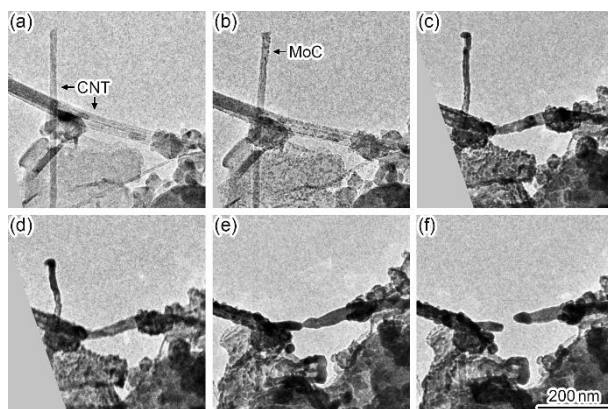
## Supplementary information

### Solid state molybdenum carbide nanomotors driven via high temperature carbon-decomposition catalytic reactions

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**Fig. S1** Time series of TEM images observed in the consumption and degradation process of CNTs by MoC nanoparticles during *in situ* laser irradiation. The surrounding region around the CNTs is the vacuum. The irradiation density during the observation of images (a), (b) and (c)–(f) was  $1 \times 10^7$  W/m<sup>2</sup>,  $5 \times 10^7$  W/m<sup>2</sup>, and  $6 \times 10^7$  W/m<sup>2</sup>, respectively.