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Detachment and re-attachment of vertically aligned single-walled carbon nanotube films YOICHI MURAKAMI, SHIGEO MARUYAMA, The University of Tokyo — A hot-water assisted detachment method of CVD-grown vertically aligned single-walled carbon nanotube (VA-SWNT) films from substrates has been developed. In particular, we found that the VA-SWNT films is efficiently peeled off by submersing the substrate into heated (≥ 60 °C) distilled water, and the detached film floats on the water surface. Furthermore, the detached film is readily re-attached to arbitrary surfaces. SEM observation confirms that the aligned morphology is perfectly preserved even after the re-attachment to other substrates. Mechanism of the proposed hot-water assisted film detachment method is investigated and suggested.

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