

Growth of SWNT on Silicon Wafer by APCVD with Co-Mo Catalyst

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In this contribution, we report a simple method to grow SWNT on silicon wafer. With a Co-Mo solution formulation developed in our group, the catalyst is easy to prepare by simply dropping the solution on silicon wafers. Through a so called DSD (drop-spread-dry) process, a uniform catalyst film composed of well-distributed nanoparticles is formed. By changing the concentration of catalyst solution, various forms of SWNT including random network, vertically aligned arrays, and scattered orderly arrays were synthesized through atmospheric CVD, which in the future will lead to many potential applications based on flat substrate.