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Isolated hollow nano-spheres of Co on the surface TOSHIFUMI TERUI, TAKASHI NAGASE, HIROYUKI HASEGAWA, SHINRO MASHIKO, National Institute of Information and Communications Technology, YASUHARU KODUKA, YE QUAN-LIN, HIROFUMI YOSHIKAWA, MOTOTAKA ONISHI, KUNIO AWAGA, Department of Chemistry, Nagoya University — In magnetic materials of sub-micron and the nano-meter size, peculiar magnetic structures and characteristics are expected. The hollow sphere of Co is an interesting material in such nano magnetic materials because of the unique structure. The diameter and the thickness of shell of the hollow sphere of Co can be accurately controlled between 100-500nm and 40nm respectively. It is necessary to examine the physical properties about isolated hollow sphere of Co to apply this material as nano-spin material. Therefore, we combined the top down and the bottom up technique to isolate the sample on the surface. For example, the nano-gap electrode and patterns were fabricated by EB lithography and FIB, and manipulation and the conduction measurement were performed by SEM with probe.

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