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The measuring the conductance of carbon fullerene and onion. MAKOTO YOSHIDA, YOSHIHIKO KURUI, YOSHIFUMI OSHIMA, KUNIO TAKAYANAGI, Tokyo Institute of Technology Department of Physics, TOKYO INSTITUTE OF TECHNOLOGY DEPARTMENT OF PHYSICS TEAM — In this study, we simultaneously observed the conductance and the structure of carbon nano-materials (C60 and carbon onion) using transmission electron microscopy(TEM). This TEM is combined with scanning tunneling microscope (STM) system. C60 and carbon onion was fabricated and sandwiched between two gold electrodes of STM. As a results, the C60 and carbon onion show a metallic conductance (the same order magnitude of $2e^2/h$) at the low bias. These values are near to results of previous theoretical reports. Further more, we obtained the conductance variation which is strongly affected by the connection between the C60 and metal electrodes.

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