

Integrated Graphene Researches at Sungkyunkwan University

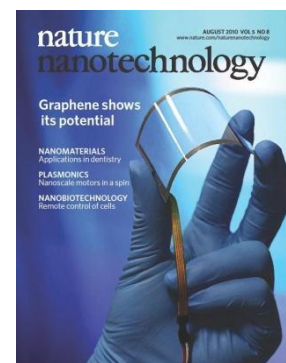
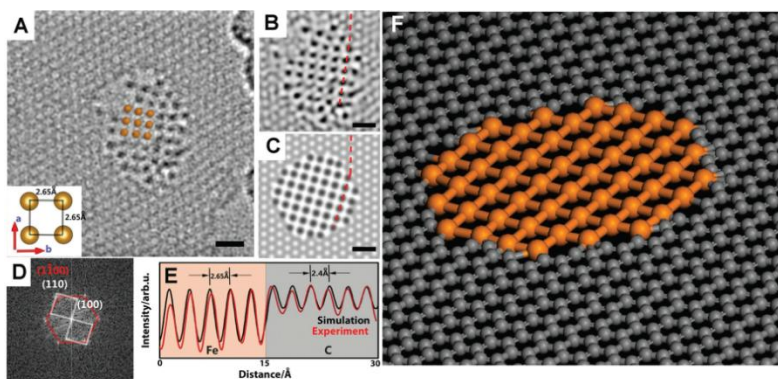
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Two major organizations for integrated graphene researches are present at Sungkyunkwan University (SKKU); Center for Integrated Nanostructure Physics (CINAP) and SKKU Advanced Institute of Nano Technology (SAINT).

CINAP is cutting edge research institute founded by Institute of Basic Science (IBS) in Korea. The center is to secure creative knowledge and fundamental technology for the future through world-class basic science research in Korea. The CINAP goals are to conduct outstanding research in the fields of fundamental and applied physics of low dimensional structures such as hybrid graphene structure and to make young scientists committed to nanophysics and nanoscience. To establish interdisciplinary research center on nanostructures incorporating condensed matter physics, biophysics, organic and inorganic chemistry, and material science, we established five groups, consisting of 1) synthesis of hybrid nanostructures and their new functional properties group, 2) structure analysis group, 3) photo-thermoelectric group, 4) correlation nanoscopy group, 5) computational modeling group. 11 professors from SKKU are participating in the research of CINAP.

SAINT is an unique graduate school for an interdisciplinary collaboration between SKKU and Samsung electronics. With the strategic alliance of both organizations, fundamental understanding of graphene applications is being investigated. Sumio Iijima is the director of SAINT and 28 professors from SKKU are participating in graphene research. Staff scientists from SAIT are also doing the close collaboration with SAINT.



(left) Free standing iron membrane suspended in graphene pores from CINAP (Science, 2014)

(right) role-to-role production of graphene films for transparent electrodes from SAINT