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[\[Material\] The Findings of NCTU's International Cooperated Project on Novel Green Material Presented in
《Science》](#)

[Material] The Findings of NCTU's International Cooperated Project on Novel Green Material Presented in Science
([Chinese Version](#))

Radio Taiwan International & NCTU Latest News (2009/11/13) A young research team from National Chiao Tung University, NCTU, participates in a cross-disciplinary international project which results in an outstanding breakthrough in developing the multi-functional green material BiFeO₃. Science introduces the story in its 13th-November issue.

The young research team of Assistant Professor Ying-Hao CHU and Master student Hung-zhi WANG at Dept. of Materials Science and Engineering, NCTU, participates in an international and cross-field cooperation project with teams from UC Berkeley, Cornell University, UC Santa Barbara, University of Illinois at Urbana Champaign, Pennsylvania State University and Lawrence Berkeley National Laboratory. The project has discovered new characteristics in the multi-functional oxide material BiFeO₃, which makes room for BiFeO₃ to be one novel green energy piezoelectric material. The result is introduced in the 13th-November issue of Science.

Ying-Hao CHU points out, the present fine piezoelectric materials mostly consist of the heavy metal lead, which can damage human health. This time, the team has discovered that lead-free BiFeO₃ alone can perform certain special deformation phase boundary characteristic, due to which the material could be further applied to develop piezoelectric material. This is the reason why their findings would draw such an attention. And Assistant Professor Ying-Hao CHU is one of the rare specialists in the world who are capable of conducting functional oxide film growth. This is the special contribution to the cooperation. The team's laboratory help with the development of the sample materials which is crucial to the proceeding of the research project.

Further Information:

[Radio Taiwan International 2009/11/13](#) (Chinese)

[NCTU Latest News 2009/11/13](#) (Chinese)

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