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One-pot Polymer Conjugation on Carbon Nanotubes through Simultaneous π - π Stacking and the Biginelli Reaction

*Xu Ren¹, Bin Yang¹, , Yuan Zhao¹, Xiaoyong Zhang¹, Xing Wang^{*2}, Yen Wei¹, Lei Tao^{*1}*

¹ The Key Laboratory of Bioorganic Phosphorus Chemistry & Chemical Biology (Ministry of Education), Department of Chemistry, Tsinghua University, Beijing 100084, P. R. China.

² The State Key Laboratory of Chemical Resource Engineering, Beijing University of Chemical Technology, Beijing 100029, P. R. China.

ABSTRACT: The Biginelli reaction has been utilized as an effective click reaction to collaborate with π - π stacking to prepare carbon nanotube-polymer conjugates. The synthesized polymers are successfully anchored on carbon nanotube surface via ‘grafting to’ strategy, and the obtained carbon nanotube-polymer composites possessing characteristic properties of anchored polymer can be well dispersed in general solution to expand carbon nanotubes application realm.

INTRODUCTION

The application of carbon nanotubes (CNTs) which own unique structural and electronic properties, high tensile strength and quasi-ballistic conductance¹⁻⁴ has been

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