

Peptides that Noncovalently Functionalize Single Wall Carbon Nanotubes to Give Controlled Solubility Characteristics

Leah S. Witus[†], John-David R. Rocha[†], Virany Yuwono[†], Sergey E. Paramonov^{†,§}, R. Bruce Weisman[†], Jeffrey D. Hartgerink*^{†,‡}

[†]Department of Chemistry and [‡]Bioengineering, Rice University, 6100 Main Street, MS60, Houston, Texas 77005

[§]Current address: Department of Chemistry, University of California Berkeley, CA 94720

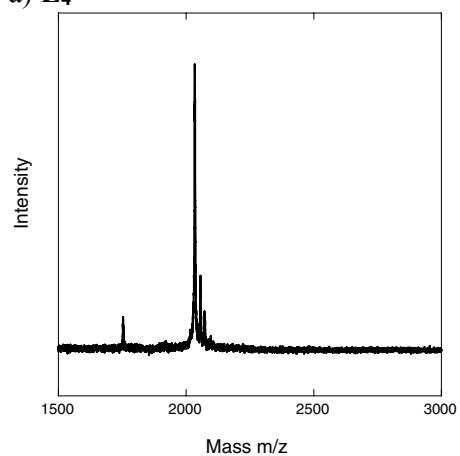
Supplemental Data:

Supplemental Table 1: Expected and measured peptide masses.

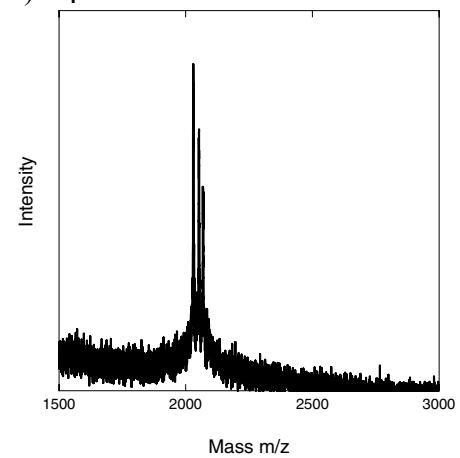
Peptide	Sequence	Expected mass	Measured mass
E₄	EEEEHSSYWYAFNNKT	[M+H] ⁺	2035
		[M+Na] ⁺	2057
		[M+K] ⁺	2073
K₄	KKKHSSYWYAFNNKT	[M+H] ⁺	2031
		[M+Na] ⁺	2053
		[M+K] ⁺	2069
E₄C₄	EEECCCCHSYWYAFNNKT	M+H] ⁺	2448
		[M+Na] ⁺	2470
		[M+K] ⁺	2486

Supplemental Figure 1: Peptide masses measured by MALDI-TOF mass spectrometry

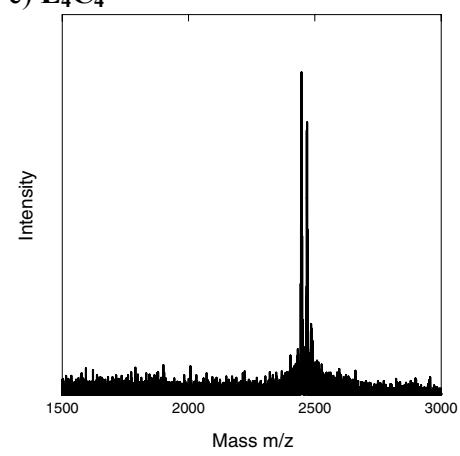
a) \mathbf{E}_4



b) \mathbf{K}_4

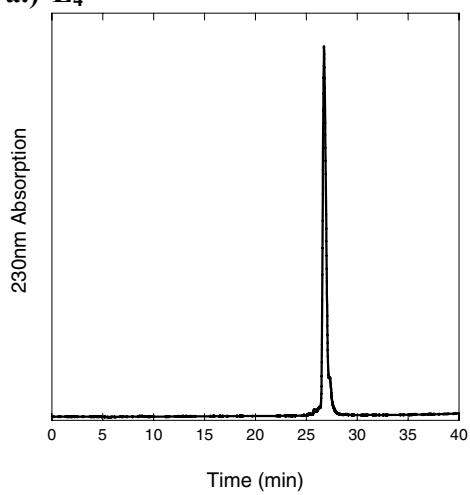


c) $\mathbf{E}_4\mathbf{C}_4$

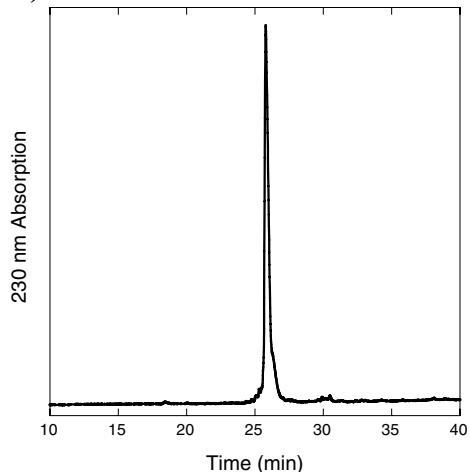


Supplemental Figure 2: Purification by HPLC

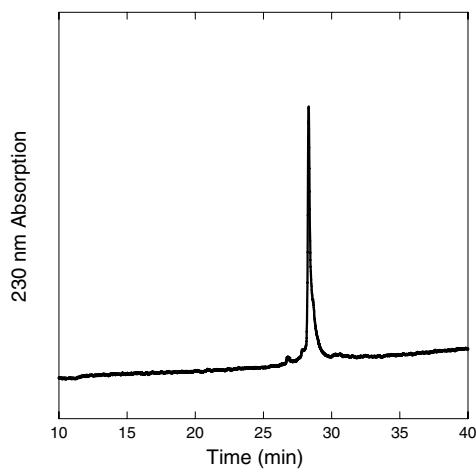
a.) E_4



b.) K_4

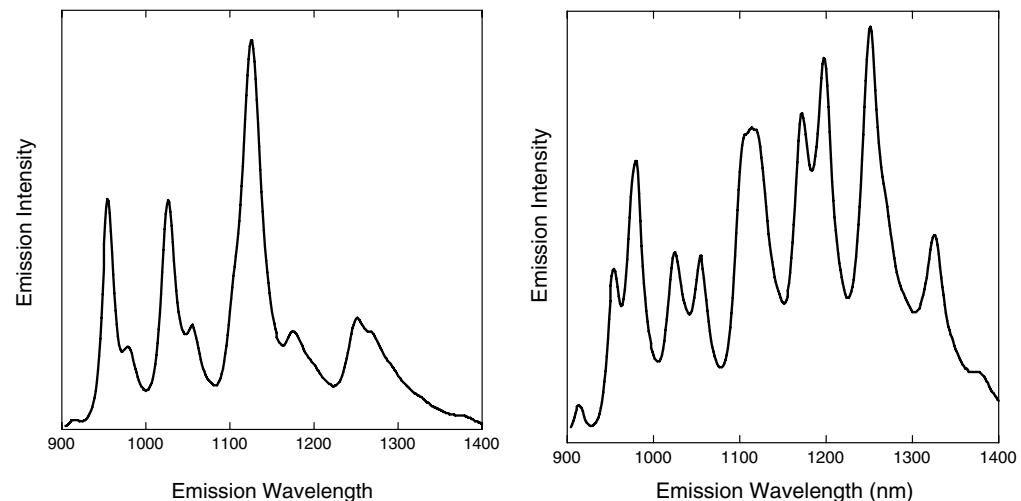


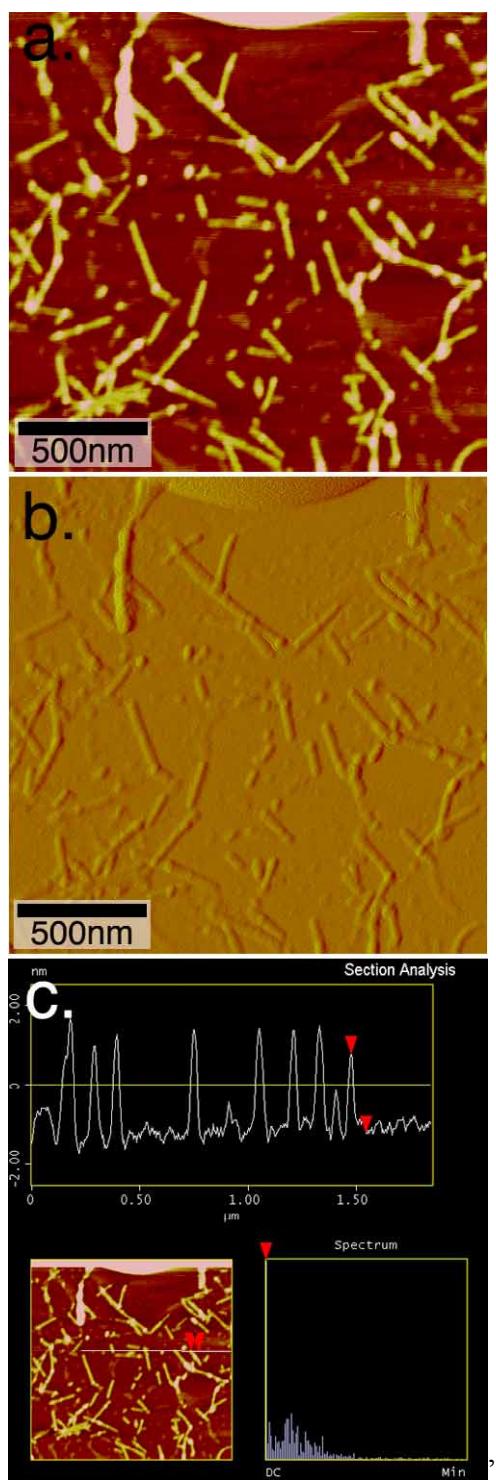
c.) E_4C_4



Supplementary material (ESI) for Journal of Materials Chemistry
This journal is © The Royal Society of Chemistry 2007

Supplemental Figure 3: One-dimensional fluorescence of SDBS-SWNT solution. a)
661 excitation wavelength b) 784 excitation wavelength





Supplemental Figure 4. Tapping Mode AFM image of peptide coated nanotubes spin coated onto mica. a) Height image, vertical scale 5nm. b) Phase image. c) Height profile of selected section of peptide coated nanotubes. Average height of peptide coated SWNT is 2.7 nm.