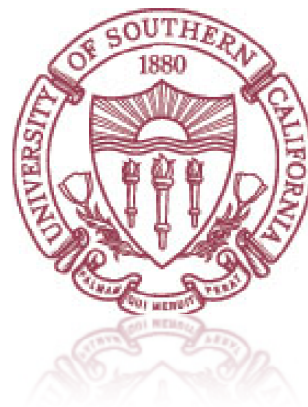




Fifteenth International Conference on the Science and Applications of Nanotubes

2-6 June 2014

University of Southern California

Los Angeles, California, USA



NT14 Program Schedule

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	June 1	June 2	June 3	June 4	June 5	June 6	June 7
9:00	Satellite Symposia CCTN14, MSIN14, CNTFA14	Shoushan Fan	Kenji Hata	Ming Zheng	Young Hee Lee	Feng Wang	Satellite Symposia GSS14
9:15							
9:30							
9:45		Florian Banhart	Alexander Hoegele	Giorgia Pastorin	H.Kataura	Yutaka Ohno	
10:00					Y. Nakai		
10:15		R. Saito	Artyukhov	R. Zhang	S.Maruyama	M. Picher	
10:30		Nasibulin	H. Hasdeo	Goltapehei	R. Krupke	Xi Ling	
10:45		Poster 1+2 Summary	Poster 3+4 Summary	Poster 5+6 Summary	Sofie Cambre	F. Papadim.	
11:00					A. Vierck		
11:15					K. Otsuka	Summary and Poster	
11:30		Poster Session 1 and Exhibition	Poster Session 3 and Exhibition	Poster Session 5 and Exhibition	H. Wang	NT15 Preview	
11:45					H. Jiang		
12:00					A. Loiseau	Closing	
12:15					Max Shulaker	Lunch	
12:30					Excursion and Banquet		
12:45							
13:00		Lunch	Lunch	Lunch			
13:15							
13:30							
13:45							
14:00							
14:15		Stephen Purcell	O. T. Gul	Jerry Tersoff			
14:30			S. Cronin				
14:45		Nikolaev	X. Wei	Laurent Cognet			
15:00	Registration/Badge Pick-up	J. Campo	Sakurai	T.Maruyama			
15:15		J. Yang	B. H. Son				
15:30		Poster Session 2 and Exhibition	Poster Session 4 and Exhibition	Poster Session 6 and Exhibition			
15:45							
16:00							
16:15							
16:30							
16:45							
17:00							
17:15		G. Soavi	T. Susi	J. S. Lauret			
17:30		Mikito Koshino	Alan Windle	Yuichiro Kato			
17:45							
18:00-20:00	Welcome Reception						

Keynote Talk

Poster summary

Invited Talk

Poster Session

Contributed Talk

Satellite Symposium

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Tensile Strength of CNT Fibres: Characteristic Length, Stress Transfer and other Impact Factors

Thurid Susanne Gspann, Nicola Montinaro, Alan Hardwick Windle

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The initial strength hype over carbon nanotubes arose from predictions of the strength of individual graphene layers, encouraged by measurements of individual MWCNTs and SWCNT bundles in AFM.^[1,2] However, while the scientists were professionally explicit as to what they had measured, the publicity assumed that these figures could also be readily realized in materials made from these components. It's against a background of this overselling that we examine the gradual improvement in strength of macroscopically useful materials. Yarn-like fibres composed of carbon nanotubes made by the direct spinning process^[2] have been used as the subject of this study. There have been occasional observations of strengths greater than 5 N/tex,^[3] which have served to maintain the enthusiasm for on-going developments. Here, we will re-examine those high strength reports in the context of the response of nanotubes aggregates to applied tensile stress.

- [1]. M.-F. Yu, O. Lourie, M. J. Dyer, K. Moloni, T. F. Kelly, R. S. Ruoff, *Science* 287, p.637 (2000)
- [2]. M.-F. Yu, B. S. Files, S. Arepalli, R. S. Ruoff, *Phys. Rev. Lett.* 84, p.5552 (2000)
- [3]. Y.-L. Li, I. A. Kinloch, A. H. Windle *Science* 304 p.276 (2004)
- [4]. K. Koziol, J. Vilatela, A. Moisala, M. Motta, P. Cuniff, M. Sennett, A. Windle, *Science* 318, p.1892 (2007)