



# International Conference on the Science and Application of Nanotubes

Boston College (USA)

July 6-11, 2002

## NT'02 Conference Schedule

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### Friday, July 5, 2002

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18:00 Evening welcome reception

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### Saturday, July 6, 2002

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8:00 Opening Remarks

#### Keynote Lecture

8:30-9:15 Sa-Ky1 (I26).

**"T. B. A."**

by *Richard E. Smalley*

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#### Invited Talks

9:15-9:45 Sa-In1 (I2).

**"Computational Diagnosis of Defective Nanotubes: Stability with Respect to Thermal and Optical Perturbations"**

by *Yoshiyuki Miyamoto, Savas Berber, Mina Yoon, Angel Rubio, and David Tomanek*

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9:45-10:15 **Coffee Break**

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10:15-10:45 Sa-In2 (I8).

**"Coalescence and Nanoscale Welding of Single-walled Carbon Nanotubes."**

by *J.C. Charlier, M. Terrones, F. Banhart, N. Grobert, H. Terrones, P.M. Ajayan*

10:45-11:15 Sa-In3 (I20).

**"Electronic Properties of  $(\text{Gd}@C_{82})_n@SWNT$  Peapods"**

by *Hisanori Shinohara*

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**Poster++ Talk**

11:15-11:30

Sa-PS1-Sy1 (P48).

**"Chemical probe method for structure analysis of SWNTs with thermogravimetric measurements"**by *M. Yudasaka, M. Zhang, A. Koshio, S. Iijima*

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11:30-12:30 **Poster+ Session 1: Synthesis**

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12:30-14:00 **Lunch Break**

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14:00-15:30 **Poster Session 1: Synthesis**

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15:30-15:45 **Coffee Break****Poster++ Talk**

15:45-16:00 Sa-P++2 (P206).

**"In-situ Chemical Study of Aqueous Fluid Inside Carbon Nanotubes"**by *Nevin Naguib, Haihui Ye, Yury Gogotsi, Almila Guvenc Yazicioglu, and Constantine Megaridis*

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16:00-17:00 **Poster+ Session 2: Synthesis**

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17:00-18:30 **Poster Session 2: Synthesis**

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18:30-20:00 **Dinner**

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20:00-22:00 **Discussions**

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**Sunday, July 7, 2002**

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**Keynote Lecture**

8:30-9:15 Su-Ky2 (I7).

**"EELS investigation of plasmons in individual nanotubes"**by *C. Colliex, M. Kociak, O. Stephan, D. Taverna***Invited Talks**

9:15-9:45 Su-In4 (I6).

**"Spinning Carbon Nanotubes Fibers"**by *S. Badaire, B. Vigolo, C. Zakri, M. Maugey, A. Derré, P. Poulin, P. Launois, M. Lucas*

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9:45-10:15 **Coffee Break**

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10:15-10:45 Su-In5 (I9).

**"Fabrication, Characterization and Property of Aligned Multi-walled Carbon nanotubes"**

by *S. S. Xie, W. Y. Zhou, Z. W. Pan, B. H. Chang, W. Z. Li, L. Lu*

10:45-11:15 Su-In6 (I5).

**"Formation Mechanism and Controlled Growth of Boron Nitride Nanotubes Produced by Mechano-thermal Process"**

by *Y. Chen, J. Fitzgerald and M. Conway*

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**Poster++ Talk**

11:15-11:30 Su-P++3 (P8).

**"Massively parallel simulations of nanotube and peapod formation"**

by *Syogo Tejima, Mikio Iizuka, Kazuo Minami, Hisashi Nakamura, Mina Yoon, Savas Berber, David Tomanek, Noejung Park, Hiroshi Okuda*

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11:30-12:30 **Poster+ Session 3: Synthesis**

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12:30-14:00 **Lunch Break**

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14:00-15:30 **Poster Session 3: Synthesis**

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15:30-15:45 **Coffee Break**

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**Poster++ Talk**

15:45-16:00 Su-P++4 (P208).

**"Self assembly of catalyst for periodic arrays of aligned carbon nanotubes"**

by *Jakub Rybczynski, Michael Hilgendorff, Michael Giersig*

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16:00-17:00 **Poster+ Session 4: Synthesis**

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17:00-18:30 **Poster Session 4: Synthesis**

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18:30-20:00 **Dinner**

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20:00-22:00 **Discussions**

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**Monday, July 8, 2002**

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**Keynote Lecture**

8:30-9:15 Mo-Ky3 (I17).

**"Carbon nanotubes and nanofibers with different morphology"**

by *M. Endo, Y. A. Kim*

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**Invited Talks**

9:15-9:45 Mo-In7 (I4).

**"Are Carbon Nanostructures an Efficient Hydrogen Storage Medium?"**

by *M. Hirscher, M. Becher, M. Haluska, X. Chen, U. Dettlaff-Weglikoska, and S. Roth*

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9:45-10:15 **Coffee Break**

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10:15-10:45 Mo-In8 (I21).

**"Adsorptive and sieving properties of single wall carbon nanohorns for gases"**

by *K. Kaneko, H. Tanaka, H. Kanoh, K. Murata, D. Kasuya, M. Yudasaka, S. Iijima, F. Kokai and K. Takahashi*

10:45-11:15 Mo-In9 (I11).

**"Feynman Crystal Growth Within Single Walled Carbon Nanotubes"**

by *J. Sloan, A.I. Kirkland, J.L. Hutchison and M.L.H. Green*

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**Poster++ Talk**

11:15-11:30 Mo-P++5 (P51).

**"Raman investigation of collective electronic effects in carbon nanotubes"**

by *Chaoyang Jiang, Kris Kempa, Jialong Zhao, Ulrich Schlecht, Yuwei Fan, Thomas Basch, Ute Kolb, Marko Burghard, Alf Mews*

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11:30-12:30 **Poster+ Session 5: Synthesis**

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12:30-14:00 **Lunch Break**

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14:00-15:30 **Poster Session 5: Synthesis**

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15:30-15:45 **Coffee Break**

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15:45-18:00 **Free Time**

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18:00-20:00 **Boat Trip**

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20:00-22:00 **Discussions**

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**Tuesday, July 9, 2002**

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**Keynote Lecture**

8:30-9:15 Tu-Ky4 (I15).

**"Single Carbon Nanotube Spectroscopy"**

by *M. S. Dresselhaus, R. Saito, A. Jorio, A. G. Souza Filho, G. Dresselhaus, Ge. G. Samsonidze, M. A. Pimenta*

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**Invited Talks**

9:15-9:45 Tu-In10 (I28).

**"Boron-, Nitrogen- and Iron-doped Carbon Nanomaterials: Controlled Synthesis, Electronic Properties and Novel Molecular Devices"**

by *M. Terrones\**, *P.M. Ajayan*, *Y. Bando*, *F. Banhart*, *M. Baxendale*, *D.L. Carroll*, *J.-C. Charlier*, *R. Czerw*, *N. Grobert*, *D. Golberg*, *W.K. Hsu*, *R. Kamalakaran*, *F. López-Urías*, *J.L. Morán-López*, *E. Muñoz-Sandoval*, *M. Mayne*, *D. Ramírez*, *M. Reyes-Reyes*, *N.L. Rupesinghe*, *T. Seeger*, *H. Terrones*

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9:45-10:15 **Coffee Break**

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10:15-10:45 Tu-In11 (I3).

**"Superconductivity in carbon nanotubes"**

by *M. Ferrier*, *M. Kociak*, *A. Kasumov*, *S. Gueron*, *B. Reulet* and *H. Bouchiat*

10:45-11:15 Tu-In12 (I24).

**"Multiwall Carbon Nanotube formation from CVD and the stability of ultra-narrow inner tubes"**

by *G.A.J. Amaratunga*, *I.Alexandrou*, *M.Chhowalla*, *C. Ducati*, *N. Sano*, *D. Roy*, *K.Teo*

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**Poster++ Talk**

11:15-11:30 Tu-P++6 (P210).

**"Raman and Infrared Active Modes of BN-nanotubes"**

by *L. Wirtz*, *A. Rubio*, *R. Arenal de la Concha*, *A. Loiseau*, *F. Ducastelle*, and *S. Lefrant*

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11:30-12:30 **Poster+ Session 6: Characterization**

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12:30-14:00 **Lunch Break**

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14:00-15:30 **Poster Session 6: Characterization**

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15:30-15:45 **Coffee Break**

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**Poster++ Talk**

15:45-16:00 Tu-P++7 (P178).

**"Curvature-induced polarization in carbon nanoshells"**

by *Traian Dumitrica*, *Chad M. Landis*, *Boris I. Yakobson*

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16:00-17:00 **Poster+ Session 7: Electronic Properties**

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17:00-18:30 **Poster Session 7: Electronic Properties**

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18:30-20:00 **Dinner**

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20:00-22:00 **Discussions**

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**Wednesday, July 10, 2002**

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**Keynote Lecture**

8:30-9:15 We-Ky5 (I22).

**"Carbon Nanotube Electronics"**by *Phaedon Avouris*

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**Invited Talks**

9:15-9:45 We-In13 (I1).

**"Electronic Properties of Nanotube Intramolecular Junctions"**by *Ph. Lambin*

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9:45-10:15 **Coffee Break**

10:15-10:45 We-In14 (I13).

**"Effects of Pi and Sigma Interactions on the Bandgaps of Quasimetallic Carbon Nanotubes"**by *C.T. White, J.W. Mintmire, and I. Cabria*

10:45-11:15 We-In15 (I18).

**"Mapping the One-dimensional Electronic States of Nanotube Peapods Structures"**by *Ali Yazdani*

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**Poster++ Talk**

11:15-11:30 We-P++8 (P171).

**"Y-junction Carbon Nanotubes"**by *W.Z. Li, J.G. Wen, Z.F. Ren*

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11:30-12:30 **Poster+ Session 8: Applications**

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12:30-14:00 **Lunch Break**

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14:00-15:30 **Poster Session 8: Applications**

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15:30-15:45 **Coffee Break**

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**Poster++ Talk**

15:45-16:00 We-P++9 (P165).

**"Carbon nanotube for nanoelectronics"**by *Wonbong Choi, Byoung-Ho Cheong, Jujin Kim, Jaeuk Ju, Eunju Bae, G.S Chung*

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16:00-17:00 **Poster+ Session 9: Applications**

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17:00-18:30 **Poster Session 9: Applications**

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18:30-22:00 **Banquet**

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**Thursday, July 11, 2002**

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**Keynote Lecture**

8:30-9:15 Th-Ky6 (I27).

**"T. B. A."**

by *Charles M. Lieber*

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**Invited Talks**

9:15-9:45 Th-In16 (I19).

**"Fabrication and Application of Functional Macroscopic Structures of Carbon Nanotubes: from Self-Assembly to Imaging"**

by *Otto Zhou*

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9:45-10:15 **Coffee Break**

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10:15-10:45 Th-In17 (I12).

**"Optical Properties and Resonant Raman Spectroscopy of Carbon Nanotubes"**

by *R. Saito, A. Grueneis, A. Jorio, A. G. Souza Filho, M. S. Dresselhaus, G. Dresselhaus, Ge. G. Samsonidze, L. G. Cancado, M. A. Pimenta*

10:45-11:15 Th-In18 (I16).

**"Exploring the concave nanospace inside single wall nanotubes by Raman scattering"**

by *H. Kuzmany, T. Pichler, R. Pfeiffer, A. Kukovecz, F. Zerbetto, and M. Melle-Franco*

11:15-11:45 Th-In19 (I14).

**"Field electron emission from isolated nanotubes"**

by *Jean-Marc Bonard*

11:45-12:15 Th-In20 (I10).

**"Single-Wall Carbon Nanotubes: Dynamics of Charge-Carriers and Energetics of Gas-Surface Interactions"**

by *Tobias Hertel, Gunnar Moos, Hendrik Ulbricht, Jennah Kriebel, and Roman Fasel*

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12:15-14:00 **Lunch Break**

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14:00-14:30 Th-In21

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14:30-14:45 Th-P++11

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14:45-15:00 Th-P++12

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15:00-15:30 **Closing Remarks**

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