

Nikos Tagmatarchis

Publications List

A. Peer-Reviewed Refereed Journals

1995-1998

1. H. E. Katerinopoulos, **N. Tagmatarchis**, G. Zaponakis, N. Kefalakis, K. Kordatos, E. Spyraakis, K. Thermos, “ β -Alkoxy-substituted phenethylamines. A family of compounds potentially active at the dopamine and α -adrenergic receptors”, *Eur. J. Med. Chem.* **1995**, *30*, 949
2. **N. Tagmatarchis**, H. E. Katerinopoulos, “Synthetic studies on the octahydrobenzo[f]quinoline system”, *J. Heterocyclic Chem.* **1996**, *33*, 983
3. **N. Tagmatarchis**, H. E. Katerinopoulos, K. Thermos, “N-Substituted *trans*-octahydrobenzo[f]- and -[g]quinolines: Ligands for dopaminergic and adrenergic receptors”, *J. Med. Chem.* **1998**, *41*, 4165

1999

4. F. H. Jones, M. J. Butcher, B. N. Cotier, P. Moriarty, P. H. Beton, V. R. Dhanak, K. Prassides, K. Kordatos, **N. Tagmatarchis**, F. Wudl, “Oscillations in the valence band photoemission spectrum of the heterofullerene C₅₉N: A photoelectron interference phenomenon”, *Phys. Rev. B* **1999**, *59*, 9834
5. **N. Tagmatarchis**, A. G. Avent, K. Prassides, T. J. S. Dennis, H. Shinohara, “Separation, isolation and characterization of two minor isomers of the [84]fullerene (C₈₄)”, *Chem. Commun.* **1999**, 1023
6. H. Kuzmany, W. Plank, J. Winter, O. Dubay, **N. Tagmatarchis**, K. Prassides, “Raman spectrum and stability of (C₅₉N)₂”, *Phys. Rev. B* **1999**, *60*, 1005
7. F. Simon, D. Arcon, **N. Tagmatarchis**, S. Garaj, L. Foro, K. Prassides, “ESR signal in azafullerene (C₅₉N)₂ induced by thermal homolysis”, *J. Phys. Chem. A* **1999**, *103*, 6969
8. M. J. Butcher, F. H. Jones, P. H. Beton, P. Moriarty, B. N. Cotier, M. D. Upward, K. Prassides, K. Kordatos, **N. Tagmatarchis**, F. Wudl, V. Dhanak, T. K. Johal, C. Crotti, C. Comicioli, C. Ottaviani, “C₅₉N monomers: Stabilization through immobilisation”, *Phys. Rev. Lett.* **1999**, *83*, 3478
9. M. J. Butcher, F. H. Jones, P. Moriarty, P. H. Beton, K. Prassides, K. Kordatos, **N. Tagmatarchis**, F. Wudl, “Room temperature manipulation of the heterofullerene C₅₉N on Si(100)-2x1”, *Appl. Phys. Lett.* **1999**, *75*, 1074

2000

10. M. J. Butcher, F. H. Jones, B. N. Cotier, M. D. R. Taylor, P. Moriarty, P. H. Beton, K. Prassides, **N. Tagmatarchis**, C. Comicioli, C. Ottaviani, C. Crotti, “Chemisorption of azafullerene on silicon: isolating C₅₉N monomers”, *Mater. Sci. Engin. B* **2000**, *74*, 202
11. W. Plank, T. Pichler, H. Kuzmany, O. Dubay, **N. Tagmatarchis**, K. Prassides, “Resonance Raman excitation and electronic structure of the single bonded dimers (C₆₀⁻)₂ and (C₅₉N)₂”, *Eur. Phys. J. B* **2000**, *17*, 33
12. **N. Tagmatarchis**, H. Shinohara, “Production, separation, isolation and spectroscopic study of

dysprosium endohedral metallofullerenes”, *Chem. Mater.* **2000**, *12*, 3222

13. **N. Tagmatarchis**, H. Shinohara, “Organic chemistry with heterofullerenes. Photosensitized oxygenation of alkenes”, *Org. Lett.* **2000**, *2*, 3551
14. **N. Tagmatarchis**, H. Shinohara, T. Pichler, M. Krause, H. Kuzmany, “Electronic absorption and vibration spectroscopy of azafullerene C₅₉HN and its oxide C₅₉HNO”, *J. Chem. Soc. Perkin Trans. 2* **2000**, 2361
15. **N. Tagmatarchis**, E. Aslanis, H. Shinohara, K. Prassides, “Isolation and spectroscopic study of a series of mono- and di-erbium C₈₂ and C₈₄ endohedral metallofullerenes”, *J. Phys. Chem. B* **2000**, *104*, 11010
16. **N. Tagmatarchis**, K. Okada, T. Tomiyama, H. Shinohara, “Synthesis and spectroscopic characterization of the second isomer of (C₆₉N)₂ (II) heterofullerene”, *Synlett.* **2000**, 1761

2001

17. J. M. Auerhammer, T. Kim, M. Knupfer, M. S. Golden, J. Fink, **N. Tagmatarchis**, K. Prassides, “Vibrational and electronic excitations of (C₅₉N)₂”, *Solid State Commun.* **2001**, *117*, 697
18. T. Pichler, H. Kuzmany, **N. Tagmatarchis**, K. Prassides, “Phases for the azafullerides Rb_xC₅₉N”, *Phys. Rev. B* **2001**, *63*, 140301
19. K. Thermos, G. E. Froudakis, **N. Tagmatarchis**, H. E. Katerinopoulos, “Cis- and trans- N-benzyl- octahydrobenzo[g]-quinolines. Adrenergic and dopaminergic activity studies”, *Bioorg. Med. Chem. Lett.* **2001**, *11*, 883
20. C. Silien, I. Marenne, J. Auerhammer, **N. Tagmatarchis**, K. Prassides, P. A. Thiry, P. Rudolf, “Adsorption of fullerene and azafullerene on Cu(111) studied by electron energy loss spectroscopy”, *Surf. Science* **2001**, 482-485, 1
21. **N. Tagmatarchis**, E. Aslanis, K. Prassides, H. Shinohara, “Mono-, di- and tri- erbium endohedralmetallofullerenes: Production, separation, isolation and spectroscopic study”, *Chem. Mater.* **2001**, *13*, 2374
22. **N. Tagmatarchis**, H. Kato, H. Shinohara, “Novel singlet oxygen generators: Endohedral metallofullerenes M@C₈₂ (M= Dy, Gd, La) and Dy₂@C_{2n} (2n= 84, 86, 88, 90, 92, 94); the role of the nature and the number of the entrapped metals inside fullerenes”, *Phys. Chem. Chem. Phys.* **2001**, *3*, 3200
23. **N. Tagmatarchis**, K. Okada, T. Tomiyama, T. Yoshida, Y. Kobayashi, H. Shinohara, “A catalytic synthesis and structural characterization of a new [84]fullerene isomer”, *Chem. Commun.* **2001**, 1366
24. **N. Tagmatarchis**, H. Shinohara, “Fullerenes in medicinal chemistry and their biological applications”, *Mini-Rev. Med. Chem.* **2001**, *1*, 339
25. **N. Tagmatarchis**, H. Shinohara, M. Fujitsuka, O. Ito, “Photooxidation of olefins sensitized by bisazafullerene (C₅₉N)₂ and hydroazafullerene C₅₉HN; Product analysis, emission of singlet oxygen and transient absorption spectroscopy”, *J. Org. Chem.* **2001**, *66*, 8026
26. I. Sinakis, **N. Tagmatarchis**, E. Aslanis, N. Ioannidis, V. Petrouleas, H. Shinohara, K. Prassides, “Dual-mode X-band EPR study of two isomers of the endohedral metallofullerene Er@C₈₂”, *J. Am. Chem. Soc.* **2001**, *123*, 9924
27. M. Krause, S. Baes-Fischlmair, R. Pfeiffer, W. Plank, T. Pichler, H. Kuzmany, **N.**

Tagmatarchis, K. Prassides, "Thermal stability and high temperature graphitization of bisazafullerene (C₅₉N)₂ as studied by IR and Raman spectroscopy", *J. Phys.Chem. B* **2001**, *105*, 11964

2002

28. G. S. Forman, **N. Tagmatarchis**, H. Shinohara, "Novel solid state synthesis and characterization of (C₇₀)₂ dimers", *J. Am. Chem. Soc.* **2002**, *124*, 178
29. **N. Tagmatarchis**, G. S. Forman, A. Taninaka, H. Shinohara, "Cross-fullerene dimers (C₆₀)(C₇₀): Synthesis, characterization and mechanism", *SynLett.* **2002**, 235
30. **N. Tagmatarchis**, A. Taninaka, H. Shinohara, "Production and EPR characterization of exohedrally perfluoroalkylated paramagnetic lanthanum metallofullerenes: (La@C₈₂)-(C₈F₁₇)₂", *Chem. Phys. Lett.* **2002**, *355*, 226
31. M. R. C. Hunt, T. Pichler, L. Siller, P. A. Bruhwiler, M. S. Golden, **N. Tagmatarchis**, K. Prassides, P. Rudolf, "Final state interference effects in valence band photoemission of (C₅₉N)₂", *Phys. Rev. B* **2002**, *66*, 193404
32. **N. Tagmatarchis**, V. Georgakilas, M. Prato, H. Shinohara, "Sidewall functionalization of single-walled carbon nanotubes through electrophilic addition", *Chem. Commun.* **2002**, 2010
33. **N. Tagmatarchis**, D. Arcon, M. Prato, H. Shinohara, "Production, isolation and structural characterization of [92]fullerene isomers", *Chem. Commun.* **2002**, 2992
34. V. Georgakilas, **N. Tagmatarchis**, D. Pantarotto, A. Bianco, J.-P. Briand, M. Prato, "Aminoacid functionalization of water soluble carbon nanotubes", *Chem. Commun.* **2002**, 3050

2003

35. **N. Tagmatarchis**, M. Prato, "The addition of azomethine ylides to [60]fullerene leading to fulleropyrrolidines", *SynLett.* **2003**, 768
36. D. Tasis, **N. Tagmatarchis**, V. Georgakilas, M. Prato "Soluble carbon nanotubes", *Chem. Eur. J.* **2003**, *9*, 4000
37. D. Tasis, **N. Tagmatarchis**, V. Georgakilas C. Gamboz, M. -R. Soranzo, M. Prato, "Supramolecular organized structures of fullerene-based materials and organic functionalization of carbon nanotubes", *Compt. Rend. Chimie* **2003**, *6*, 598
38. D. M. Guldi, M. Marcaccio, D. Paolucci, F. Paolucci, **N. Tagmatarchis**, D. Tasis, E. Vasquez, M. Prato, "Single wall carbon nanotubes-ferrocene nanohybrids. First observation of intramolecular electron transfer in functionalized SWNT", *Angew. Chem. Int. Ed.* **2003**, *42*, 4206
39. A. Callegari, M. Marcaccio, D. Paolucci, F. Paolucci, **N. Tagmatarchis**, D. Tasis, E. Vazquez, M. Prato, "Anion recognition by functionalized single wall carbon nanotubes", *Chem. Commun.* **2003**, 2576

2004

40. M. Krause, V. N. Popov, M. Inakuma, **N. Tagmatarchis**, H. Shinohara, P. Georgi, L. Dunsch, H. Kuzmany, "Multipole induced splitting of metal-cage vibrations in crystalline endohedral D_{2d}-M₂@C₈₄ dimetallofullerenes", *J. Chem. Phys.* **2004**, *120*, 1873
41. **N. Tagmatarchis**, M. Prato, "Functionalization of carbon nanotubes via 1,3-dipolar cycloaddition", *J. Mater. Chem.* **2004**, *14*, 437

42. A. Callegari, S. Cosnier, M. Marcaccio, D. Paolucci, F. Paolucci, V. Georgakilas, **N. Tagmatarchis**, E. Vasquez, M. Prato, “Functionalized single wall carbon nanotubes/polypyrrole composites for the preparation of amperometric glucose biosensors”, *J. Mater. Chem.* **2004**, *14*, 807
43. R. Kumashiro, K. Tanigaki, H. Ohhashi, **N. Tagmatarchis**, H. Kato, H. Shinohara, T. Akasaka, K. Kato, S. Aoyagi, S. Kimura, M. Takata, “Azafullerene (C₅₉N)₂ thin-film field effect transistors”, *Appl. Phys. Lett.* **2004**, *84*, 2154
44. **N. Tagmatarchis**, M. Prato, “Organofullerene materials”, *Struct. Bond.* **2004**, *109*, 1
45. R. H. Xie, G. W. Bryant, G. Sun, T. Kar, Z. Chen, V. H. Smith Jr., Y. Araki, **N. Tagmatarchis**, H. Shinohara, O. Ito, “Tuning spectral properties of fullerenes by substitutional doping”, *Phys. Rev. B* **2004**, *69*, 201403
46. C. DeNadai, A. Mirone, S. S. Dhesi, P. Bencok, N. B. Brooks, I. Marenne, P. Rudolf, **N. Tagmatarchis**, H. Shinohara, T. J. S. Dennis, “Local magnetism in rare-earth metals encapsulated in fullerenes”, *Phys. Rev. B* **2004**, *69*, 184421
47. E. Xenogiannopoulou, S. Couris, E. Koudoumas, **N. Tagmatarchis**, T. Inoue, H. Shinohara, “Nonlinear optical response of some isomerically pure higher fullerenes and their corresponding endohedral metallofullerene derivatives: C₈₂-C_{2v}, Dy@C₈₂(I), Dy₂@C₈₂(I), C₉₂-C₂, Er₂@C₉₂(IV)”, *Chem. Phys. Lett.* **2004**, *394*, 14
48. D. Pantarotto, **N. Tagmatarchis**, A. Bianco, M. Prato, “Synthesis and biological properties of fullerene-containing aminoacids and peptides”, *Mini-Rev. Med. Chem.* **2004**, *4*, 805
49. D. M. Guldi, G. M. A. Rahman, J. Ramey, M. Marcaccio, D. Paolucci, F. Paolucci, S. Qin, W. T. Ford, D. Balbinot, N. Jux, **N. Tagmatarchis**, M. Prato, “Donor-acceptor nanoensembles of soluble carbon nanotubes”, *Chem. Commun.* **2004**, 2034
50. D. M. Guldi, G. N. A. Rahman, N. Jux, **N. Tagmatarchis**, M. Prato, “Integrating single-wall carbon nanotubes into donor-acceptor nanohybrids”, *Angew. Chem. Int. Ed.* **2004**, *43*, 5526
51. D. M. Guldi, I. Zilbermann, G. Anderson, N. A. Kotov, **N. Tagmatarchis**, M. Prato, “Versatile organic (fullerene)-inorganic (CdTe nanoparticle) nanoensembles”, *J. Am. Chem. Soc.* **2004**, *126*, 14340

2005

52. D. M. Guldi, I. Zilbermann, G. Anderson, N. A. Kotov, **N. Tagmatarchis**, M. Prato, “Nanosized inorganic/organic composites for solar energy conversion”, *J. Mater. Chem.* **2005**, *15*, 114
53. D. M. Guldi, H. Taieb, G. M. A. Rahman, **N. Tagmatarchis**, M. Prato, “Novel photoactive SWNT@H₂P-polymer wraps. Efficient and long-lived intracomplex charge separation”, *Adv. Mater.* **2005**, *17*, 871
54. G. M. A. Rahman, D. M. Guldi, E. Zambon, L. Pasquato, **N. Tagmatarchis**, M. Prato, “Dispersable carbon nanotubes/gold nanohybrids: Evidence for strong electronic interactions”, *Small* **2005**, *1*, 527
55. D. M. Guldi, G. M. A. Rahman, N. Jux, D. Balbinot, **N. Tagmatarchis**, M. Prato, “Multiwalled carbon nanotubes in donor acceptor nanohybrids – towards long-lived electron transfer products”, *Chem. Commun.* **2005**, 2038

56. **N. Tagmatarchis**, A. Zattoni, P. Reschiglian, M. Prato, "Separation and purification of functionalized water-soluble multi-walled carbon nanotubes by flow field-flow fractionation", *Carbon* **2005**, *43*, 1984
57. D. M. Guldi, G. M. A. Rahman, N. Jux, D. Balbinot, U. Hartnagel, **N. Tagmatarchis**, M. Prato, "Functional single-wall carbon nanotube nanohybrids. Associating SWNTs with water-soluble enzyme model systems", *J. Am. Chem. Soc.* **2005**, *127*, 9830
58. Th. A. Felekis, **N. Tagmatarchis**, "Single-walled carbon nanotube-based hybrid materials for managing charge transfer processes", *Rev. Adv. Mater. Sci.* **2005**, *10*, 272
59. **N. Tagmatarchis**, M. Prato, "Carbon-based materials: From fullerene nanostructures to functionalized carbon nanotubes", *Pure Appl. Chem.* **2005**, *77*, 1675
60. **N. Tagmatarchis**, M. Prato, D. M. Guldi, "Soluble carbon nanotubes ensembles for light-induced electron transfer interactions", *Physica E* **2005**, *29*, 546

2006

61. **N. Tagmatarchis**, A. Maigné, M. Yudasaka, S. Iijima, "Functionalization of carbon nanohorns with azomethine ylides: Towards solubility enhancement and charge transfer processes", *Small* **2006**, *2*, 490
62. D. Tasis, **N. Tagmatarchis**, A. Bianco, M. Prato, "Chemistry of carbon nanotubes", *Chem. Rev.* **2006**, *106*, 1105
63. F. Bondino, C. Cepek, **N. Tagmatarchis**, M. Prato, H. Shinohara, A. Goldoni, "Element-specific probe of the magnetic and electronic properties of Dy *incarcerated*-fullerenes", *J. Phys. Chem. B* **2006**, *110*, 7289
64. **N. Tagmatarchis**, T. Pichler, M. Krause, H. Kuzmany, H. Shinohara, "Infra-red and Raman spectroscopic study on the thermal stability and high temperature transformation of hydroazafullerene C₅₉HN", *Carbon* **2006**, *44*, 1420
65. E. Menna, F. Della Negra, M. Prato, **N. Tagmatarchis**, A. Ciogli, F. Gasparri, D. Misiti, C. Villani, "Carbon nanotubes on HPLC silica microspheres", *Carbon* **2006**, *44*, 1581
66. G. Pagona, **N. Tagmatarchis**, "Carbon nanotubes: Materials for medicinal chemistry and biotechnological applications", *Curr. Med. Chem.* **2006**, *13*, 1789
67. E. Xenogiannopoulou, E. Koudoumas, **N. Tagmatarchis**, H. Shinohara, S. Couris, "Ultrafast third-order nonlinear optical response of C₈₄, C₈₄-D₂(IV) and C₈₄-D_{2d}(II)", *Chem. Phys. Lett.* **2006**, *425*, 110
68. G. Pagona, **N. Tagmatarchis**, J. Fan, M. Yudasaka, S. Iijima, "Cone-end functionalization of carbon nanohorns", *Chem. Mater.* **2006**, *18*, 3918
69. I. D. Petsalakis, G. Pagona, G. Theodorakopoulos, **N. Tagmatarchis**, M. Yudasaka, S. Iijima, "Unbalanced strain-directed functionalization of carbon nanohorns: A theoretical investigation based on complementary methods", *Chem. Phys. Lett.* **2006**, *429*, 194
70. G. Pagona, A. S. D. Sandanayaka, Y. Araki, J. Fan, **N. Tagmatarchis**, M. Yudasaka, S. Iijima, O. Ito, "Electronic interplay in illuminated aqueous carbon nanohorn-porphyrin ensembles", *J. Phys. Chem. B* **2006**, *110*, 20729

2007

71. G. Mountrichas, S. Pispas, **N. Tagmatarchis**, "Aqueous carbon nanotubes-amphiphilic block

- copolymer nanoensembles: Towards realization of charge-transfer processes with semiconductor quantum dots”, *Small* **2007**, *3*, 404
72. I. D. Petsalakis, **N. Tagmatarchis**, G. Rotas, G. Theodorakopoulos, “Theoretical study on triphenylamine-based sensors of dicarboxylic acids”, *J. Mol. Struct. — Theochem.* **2007**, *807*, 11
73. G. Pagona, J. Fan, A. Maignè, M. Yudasaka, S. Iijima, **N. Tagmatarchis**, “Aqueous carbon nanohorn-pyrene-porphyrin nanoensembles: Controlling charge-transfer interactions”, *Diam. Relat. Mater.* **2007**, *16*, 1150
74. K. Schulte, L. Wang, P. J. Moriarty, K. Prassides, **N. Tagmatarchis**, “Resonant processes and Coulomb interactions on $(C_{59}N)_2$ ”, *J. Chem. Phys.* **2007**, *126*, 184707
75. A. S. D. Sandanayaka, G. Pagona, **N. Tagmatarchis**, M. Yudasaka, S. Iijima, Y. Araki, O. Ito, “Photoinduced electron transfer processes of carbon nanohorns with covalently linked pyrene chromophores: Charge-separation and electron-migration systems”, *J. Mater. Chem.* **2007**, *17*, 2540
76. H. Kuzmany, W. Plank, Ch. Schaman, R. Pfeiffer, F. Hasi, F. Simon, G. Rotas, G. Pagona, **N. Tagmatarchis**, “Raman scattering from nanomaterials encapsulated into single wall carbon nanotubes”, *J. Raman Spec.* **2007**, *38*, 704
77. G. Pagona, A. S. D. Sandanayaka, Y. Araki, J. Fan, **N. Tagmatarchis**, G. Charalambidis, A. G. Coutsolelos, B. Boitrel, M. Yudasaka, S. Iijima, O. Ito, “Covalent association of carbon nanohorns with porphyrin: Nanohybrid formation and photo-induced electron and energy transfer”, *Adv. Funct. Mater.* **2007**, *17*, 1705
78. D. Arcon, M. Pregelj, P. Cevc, G. Rotas, G. Pagona, **N. Tagmatarchis**, C. Ewels, “Stability, thermal homolysis and intermediate phases of solid hydroazafullerene $C_{59}HN$ ”, *Chem. Commun.* **2007**, 3386
79. G. Mountrichas, **N. Tagmatarchis**, S. Pispas, “Synthesis and solution behavior of carbon nanotubes decorated with amphiphilic block polyelectrolytes”, *J. Phys. Chem. B* **2007**, *111*, 8369
80. G. Pagona, A. S. D. Sandanayaka, A. Maigné, J. Fan, G. C. Papavassiliou, I. D. Petsalakis, B. R. Steele, **N. Tagmatarchis**, M. Yudasaka, S. Iijima, O. Ito, “Electron-transfer on aqueous photoactive carbon nanohorn-pyrene-tetrathiafulvalene hybrids”, *Chem. Eur. J.* **2007**, *13*, 7600
81. G. Mountrichas, S. Pispas, **N. Tagmatarchis**, “Grafting living polymers onto carbon nanohorns”, *Chem. Eur. J.* **2007**, *13*, 7595
82. G. Pagona, G. Rotas, I. D. Petsalakis, G. Theodorakopoulos, A. Maigné, J. Fan, M. Yudasaka, S. Iijima, **N. Tagmatarchis**, “Soluble functionalized carbon nanohorns”, *J. Nanosci. Nanotechnol.* **2007**, *7*, 3468
83. I. D. Petsalakis, **N. Tagmatarchis**, G. Theodorakopoulos, “Theoretical study of fulleropyrrolidines by density functional and time-dependent density functional theory”, *J. Phys. Chem. C* **2007**, *111*, 14139
84. I. D. Petsalakis, G. Pagona, **N. Tagmatarchis**, G. Theodorakopoulos, “Theoretical study in donor-acceptor carbon nanohorn-based hybrids”, *Chem. Phys. Lett.* **2007**, *448*, 115
85. W. Plank, H. Kuzmany, F. Simon, T. Saito, S. Ohshima, M. Yumura, S. Iijima, G. Rotas, G. Pagona, **N. Tagmatarchis**, “Fullerene derivatives encapsulated in carbon nanotubes”, *Phys. Stat. Sol. B* **2007**, *244*, 4074

2008

86. G. Pagona, N. Karousis, **N. Tagmatarchis**, “Aryl diazonium functionalization of carbon nanohorns”, *Carbon* **2008**, *46*, 604
87. K. Schulte, L. Wang, K. Prassides, **N. Tagmatarchis**, P. J. Moriarty, “C1s Photoemission and shake-up features of (C₅₉N)₂”, *J. Phys.: Condens. Mater.* **2008**, *100*, 072024
88. G. Rotas, A. S. D. Sandanayaka, **N. Tagmatarchis**, T. Ichihashi, M. Yudasaka, S. Iijima, O. Ito, “TerpyridineCu^{II}-carbon nanohorns: Metallo-nanocomplexes for photoinduced charge-separation”, *J. Am. Chem. Soc.* **2008**, *130*, 4725
89. D. Paolucci, M. Marcaccio, C. Bruno, F. Paolucci, **N. Tagmatarchis**, M. Prato, “Voltammetric quantum charging capacitance behaviour of functionalised carbon nanotubes in solution”, *Electrochimica Acta* **2008**, *53*, 4059
90. G. Pagona, G. Rotas, A. N. Khlobystov, T. W. Chamberlain, K. Porfyrakis, **N. Tagmatarchis**, “Azafullerene encapsulated within single-walled carbon nanotubes”, *J. Am. Chem. Soc.* **2008**, *130*, 6062
91. J. Tumpane, N. Karousis, **N. Tagmatarchis**, B. Norden, “Alignment of carbon nanotubes in weak magnetic fields”, *Angew. Chem. Int. Ed.* **2008**, *47*, 5148
92. N. Karousis, G. –E. Tsotsou, N. Ragoussis, **N. Tagmatarchis**, “Catalytic activity of surfactant solubilised multi-walled carbon nanotubes decorated with palladium nanoparticles”, *Diam. Relat. Mater.* **2008**, *17*, 1582
93. G. Mountrichas, G. Pagona, G. Rotas, N. Karousis, S. Pispas, **N. Tagmatarchis**, “Methodologies for the chemical functionalization of carbon nanohorns”, *J. Nanostruct. Polym. Nanocomp.* **2008**, *4*, 28
94. N. Karousis, G. –E. Tsotsou, F. Evangelista, P. Rudolf, N. Ragoussis, **N. Tagmatarchis**, “Carbon nanotubes decorated with palladium nanoparticles: Synthesis, characterization and catalytic activity”, *J. Phys. Chem. C* **2008**, *112*, 13463
95. G. Pagona, A. S. D. Sandanayaka, T. Hasobe, G. Charalambidis, A. G. Coutsolelos, M. Yudasaka, S. Iijima, **N. Tagmatarchis**, “Characterization and photoelectrochemical properties of nanostructured thin film composed of carbon nanohorns covalently functionalized with porphyrins”, *J. Phys. Chem. C* **2008**, *112*, 15735
96. N. Karousis, H. Ali-Boucetta, K. Kostarelos, **N. Tagmatarchis**, “Water-soluble functionalized carbon nanotubes for biomedical applications”, *Mater. Sci. Engin. B* **2008**, *152*, 8
97. G. Mountrichas, S. Pispas, **N. Tagmatarchis**, “Grafting onto approach for the functionalization of carbon nanotubes with polystyrene”, *Mater. Sci. Engin. B* **2008**, *152*, 40

2009

98. G. Pagona, G. Mountrichas, G. Rotas, N. Karousis, S. Pispas, **N. Tagmatarchis**, “Properties, applications and functionalization of carbon nanohorns”, *Int. J. Nanotechnol.* **2009**, *6*, 176
99. G. Rotas, **N. Tagmatarchis**, “Regioselective triphenylamine-tether-directed synthesis of [60]fullerene bis-adducts”, *Tetrahedron Lett.* **2009**, *50*, 398
100. O. Loboda, R. Zalesny, A. Avramopoulos, J. –M. Luis, B. Kirtman, **N. Tagmatarchis**, H. Reis, M. G. Papadopoulos, “Linear and nonlinear optical properties of [60]fullerene derivatives”, *J. Phys. Chem. A* **2009**, *113*, 1159

101. G. Mountrichas, T. Ichihashi, S. Pispas, M. Yudasaka, S. Iijima, **N. Tagmatarchis**, “Solubilization of carbon nanohorns by block polyelectrolyte adsorption and templated formation of gold nanoparticles”, *J. Phys. Chem. C* **2009**, *113*, 5444
102. G. Mountrichas, **N. Tagmatarchis**, S. Pispas, “Functionalization of carbon nanohorns with polyethylene oxide: Synthesis and incorporation in a polymer matrix”, *J. Nanosci. Nanotechnol.* **2009**, *9*, 3775
103. N. Karousis, T. Ichihashi, M. Yudasaka, S. Iijima, **N. Tagmatarchis**, “Decoration of carbon nanohorns with palladium and platinum nanoparticles”, *J. Nanosci. Nanotechnol.* **2009**, *9*, 6047
104. N. Karousis, R. M. Papi, A. Siskos, P. Vakalopoulou, P. Glezakos, Y. Sarigiannis, G. Stavropoulos, D. A. Kyriakidis, **N. Tagmatarchis**, “Peptidomimetic-functionalized carbon nanotubes with antitrypsin activity”, *Carbon* **2009**, *47*, 3550
105. S. P. Economopoulos, G. Pagona, M. Yudasaka, S. Iijima, **N. Tagmatarchis**, “Solvent-free microwave-assisted Bingel reaction in carbon nanohorns”, *J. Mater. Chem.* **2009**, *19*, 7326
106. G. Mountrichas, A. S. D. Sandanayaka, S. P. Economopoulos, S. Pispas, O. Ito, T. Hasobe, **N. Tagmatarchis**, “Photoinduced electron transfer in aqueous carbon nanotubes / block copolymer / CdS hybrids: Application in the construction of photoelectrochemical cells”, *J. Mater. Chem.* **2009**, *19*, 8990

2010

107. N. Karousis, S. P. Economopoulos, E. Sarantopoulou, **N. Tagmatarchis**, “Porphyrin counter ion in imidazolium-modified graphene-oxide”, *Carbon* **2010**, *48*, 854
108. R. Zalesny, O. Loboda, K. Iliopoulos, G. Chatzikyriakos, S. Couris, G. Rotas, **N. Tagmatarchis**, A. Avramopoulos, M. G. Papadopoulos, “Linear and nonlinear optical properties of triphenylamine-functionalized C₆₀: Insights from theory and experiment”, *Phys. Chem. Chem. Phys.* **2010**, *12*, 373
109. Y. Iizumi, T. Okazaki, Z. Liu, K. Suenaga, T. Nakanishi, S. Iijima, G. Rotas, **N. Tagmatarchis**, “Host-guest interactions in azafullerene (C₅₉N)-single wall carbon nanotubes (SWCNTs) peapod hybrid structures”, *Chem. Commun.* **2010**, 1293
110. N. Karousis, T. Ichihashi, S. Chen, H. Shinohara, M. Yudasaka, S. Iijima, **N. Tagmatarchis**, “Imidazolium modified carbon nanohorns: Switchable solubility and stabilization of metal nanoparticles”, *J. Mater. Chem.* **2010**, *20*, 2959
111. G. Mountrichas, S. Pispas, T. Ichihashi, M. Yudasaka, S. Iijima, **N. Tagmatarchis**, “Polymer covalent functionalization of carbon nanohorns using bulk free radical polymerization”, *Chem. Eur. J.* **2010**, *16*, 5927
112. N. Karousis, **N. Tagmatarchis**, D. Tasis, “Current progress on the chemical modification of carbon nanotubes”, *Chem. Rev.* **2010**, *110*, 5366
113. G. Pagona, S. P. Economopoulos, T. Aono, Y. Miyata, H. Shinohara, **N. Tagmatarchis**, “Molecular recognition of La@C₈₂ endohedral metallofullerene by isophthaloyl-bridged porphyrin dimer”, *Tetrahedron Lett.* **2010**, *51*, 5896
114. G. Pagona, S. P. Economopoulos, G. K. Tsikalas, H. E. Katerinopoulos, **N. Tagmatarchis**, “Fullerene-coumarin dyad as selective metal receptor. Synthesis, photophysical properties, electrochemistry and ion binding studies”, *Chem. Eur. J.* **2010**, *16*, 11969

115. N. Karousis, K. Kobayashi, H. Shinohara, **N. Tagmatarchis**, “Chemically-induced thermally-controlled peel-off of the external walls of double-walled carbon nanotubes”, *Small* **2010**, *6*, 2826
116. N. Karousis, S. P. Economopoulos, Y. Iizumi, T. Okazaki, Z. Liu, K. Suenaga, **N. Tagmatarchis**, “Microwave assisted covalent functionalization of C₆₀@SWCNT peapods”, *Chem. Commun.* **2010**, *46*, 9110
117. S. P. Economopoulos, G. Rotas, Y. Miyata, H. Shinohara, **N. Tagmatarchis**, “Exfoliation and chemical modification using microwave irradiation affording highly functionalized graphene” *ACS Nano* **2010**, *4*, 7499

2011

118. N. Karousis, A. S. D. Sandanayaka, T. Hasobe, S. P. Economopoulos, E. Sarantopoulou, **N. Tagmatarchis**, “Graphene with covalently linked porphyrin antennae: Synthesis, characterization, and photophysical properties”, *J. Mater. Chem.* **2011**, *21*, 109
119. N. Karousis, T. Ichihashi, M. Yudasaka, S. Iijima, **N. Tagmatarchis**, “Microwave-assisted functionalization of carbon nanohorns via [2+1] nitrenes cycloaddition”, *Chem. Commun.* **2011**, *47*, 1604
120. S. P. Economopoulos, N. Karousis, G. Rotas, G. Pagona, **N. Tagmatarchis**, “Microwave-assisted functionalization of carbon nanostructured materials”, *Curr. Org. Chem.* **2011**, *15*, 1121
121. N. T. Cuong, M. Otani, Y. Iizumi, T. Okazaki, G. Rotas, **N. Tagmatarchis**, Y. Li, T. Kaneko, R. Hatakeyama, S. Okada, “Origin of the n-type transport behaviour of azafullerenes encapsulated single-walled carbon nanotubes”, *Appl. Phys. Lett.* **2011**, *99*, 053105
122. G. Pagona, H. E. Katerinopoulos, **N. Tagmatarchis**, “Synthesis, characterization and photophysical properties of a carbon nanohorn-coumarin hybrid material”, *Chem. Phys. Lett.* **2011**, *516*, 76

2012

123. G. Rotas, J. Ranta, A. Efimov, M. Niemi, H. Lemmetyinen, N. Tkachenko, **N. Tagmatarchis**, “Azafullerene C₅₉N-phthalocyanine dyad: Synthesis, characterization and photoinduced electron transfer”, *ChemPhysChem* **2012**, *13*, 1246
124. G. Pagona, G. Zervaki, A. S. D. Sandanayaka, O. Ito, G. Charalambidis, T. Hasobe, A. G. Coutsolelos, **N. Tagmatarchis**, “Carbon nanohorn-porphyrin dimer hybrid material for enhancing photo-energy conversion”, *J. Phys. Chem. C* **2012**, *116*, 9439
125. N. Karousis, Y. Sato, K. Suenaga, **N. Tagmatarchis**, “Direct evidence for covalent functionalization of carbon nanohorns by high-resolution electron microscopy imaging of C₆₀ conjugated onto their skeleton”, *Carbon* **2012**, *50*, 3909
126. Th. Skaltsas, N. Karousis, H. –J. Yan, C. –R. Wang, S. Pispas, **N. Tagmatarchis**, “Graphene exfoliation in organic solvents and switching solubility in aqueous media with the aid of amphiphilic block copolymers”, *J. Mater. Chem.* **2012**, *22*, 21507
127. N. Karousis, J. Ortiz, A. Sastre-Santos, T. Hasobe, K. Ohkubo, S. Fukuzumi, **N. Tagmatarchis**, “Zinc-phthalocyanine-graphene hybrid material for energy conversion: Synthesis, characterization, photophysics and photoelectrochemical cell preparation”, *J. Phys. Chem. C* **2012**, *116*, 20654

2013

128. S. P. Economopoulos, A. Skondra, K. Ladomenou, N. Karousis, G. Charalambidis, A. G. Coutsolelos, **N. Tagmatarchis**, “New hybrid materials with porphyrin-ferrocene and porphyrin-pyrene covalently linked to single-walled carbon nanotubes”, *RSC Advances* **2013**, *3*, 5539
129. C. L. Chochos, **N. Tagmatarchis**, V. Gregoriou, “Rational design on n-type organic materials for high performance organic photovoltaics”, *RSC Advances* **2013**, *3*, 7160
130. H. Yagi, Y. Tokumoto, M. Zenki, T. Zaima, T. Miyazaki, G. Rotas, **N. Tagmatarchis**, Y. Iizumi, T. Okazaki, S. Hino, “Photoemission study of the electronic structure of azafullerene encapsulated single-walled carbon nanotubes”, *Chem. Phys. Lett.* **2013**, *570*, 100
131. D. Chronopoulos, N. Karousis, T. Ichihashi, M. Yudasaka, S. Iijima, **N. Tagmatarchis**, “Benzyne cycloaddition on carbon nanohorns”, *Nanoscale* **2013**, *5*, 6388
132. Th. Skaltsas, S. Pispas, **N. Tagmatarchis**, “Photoinduced charge-transfer interactions on graphene/block copolymer electrostatically bound to tetracationic porphyrin in aqueous media”, *Chem. Eur. J.* **2013**, *19*, 9286
133. D. Chronopoulos, N. Karousis, **N. Tagmatarchis**, “Immobilized CdS nanoparticles on poly(amidoamine)-functionalized MWCNTs”, *ECS J. Solid State Sci. Technol.* **2013**, *2*, M3023
134. G. Rotas, G. Charalambidis, L. Glatzel, D. Gryko, A. Kahnt, A. G. Coutsolelos, **N. Tagmatarchis**, “A corrole-azafullerene dyad: Synthesis, characterization, electronic interactions and photoinduced charge separation”, *Chem. Commun.* **2013**, *49*, 9128
135. S. P. Economopoulos, **N. Tagmatarchis**, “Covalent functionalization of exfoliated graphene”, *Chem. Eur. J.* **2013**, *19*, 12930
136. C. Bittencourt, X. Ke, G. Van Tendeloo, **N. Tagmatarchis**, P. Guttman, “NEXAFS Spectromicroscopy of suspended carbon nanohorns”, *Chem. Phys. Lett.* **2013**, *587*, 85
137. Th. Skaltsas, X. Ke, C. Bittencourt, **N. Tagmatarchis**, “Ultrasonication induces oxygenated species and defects onto exfoliated graphene”, *J. Phys. Chem. C* **2013**, **In Press**
138. G. Pagona, G. Rotas, **N. Tagmatarchis**, “Supramolecular association of oligophenylenevinylene-based Hamilton receptor and fullerene-based cyanurate via multiple hydrogen bonding”, *Fullerenes, Nanotubes and Carbon Nanostruct.* **2013**, **In Press**
139. S. Kuhri, G. Charalambidis, P. Angaridis, T. Lazarides, G. Pagona, **N. Tagmatarchis**, A. G. Coutsolelos, D. M. Guldi, “A new approach for the photosynthetic antenna reaction centre complex with a model organized around cyanuric chloride linker”, *Chem. Eur. J.* **2013**, **In Press**

B. Refereed Proceedings

140. **N. Tagmatarchis**, K. Prassides, “Synthesis and characterisation of organometallic compounds of fullerene derivatives”, *AIP Conf. Proc.* **1999**, *Vol. 486*, p.175
141. C. Jogl, H. Kuzmany, M. Krause, W. Plank, O. Dubay, **N. Tagmatarchis**, K. Prassides, “Raman spectrum and stability of $(C_{59}N)_2$ ”, *AIP Conf. Proc.* **1999**, *Vol. 486*, p.501
142. M. J. Butcher, F. H. Jones, P. H. Beton, P. Moriarty, K. Prassides, **N. Tagmatarchis**, “ $C_{59}N$ on silicon surfaces: Monomers, dimers and multilayers”, *AIP Conf. Proc.* **1999**, *Vol. 486*, p.165
143. H. Kuzmany, C. Jogl, M. Krause, **N. Tagmatarchis**, K. Prassides, “Unusual thermal stability

- of diazafullerene”, *ACS Abstr.* **1999**, Vol. 218, p.7-MTLS
144. E. Aslanis, **N. Tagmatarchis**, H. Shinohara, K. Prassides, “Isolation and spectroscopic study of erbium C₈₂ and C₈₄ metallofullerenes”, *ECS Conf. Proc.* **2000**, Vol. 12, p.398
 145. H. Kuzmany, W. Plank, T. Pichler, **N. Tagmatarchis**, K. Prassides, “Single bonded dimers of fullerenes and fullerene derivatives”, *ECS Conf. Proc.* **2000**, Vol. 12, p.193
 146. T. Pichler, W. Plank, H. Kuzmany, **N. Tagmatarchis**, K. Prassides, “The phases of Rb_xC₅₉N from Raman spectroscopy”, *AIP Conf. Proc.* **2000**, Vol.544, p.94
 147. J. M. Auerhammer, T. Kim, M. Knupfer, M. S. Golden, J. Fink, **N. Tagmatarchis**, K. Prassides, “HREELS investigations of adsorbed azafullerenes”, *AIP Conf. Proc.* **2000**, Vol.544, p.103
 148. T. Okazaki, **N. Tagmatarchis**, H. Shinohara, “Single wall carbon nanotubes encapsulating various fullerenes”, *Cluster Science and Technology*, **2001**, p.19
 149. **N. Tagmatarchis**, H. Shinohara, “Photosensitized oxygenation of alkenes in the presence of bisazafullerene (C₅₉N)₂ and hydroazafullerene C₅₉HN”, *AIP Conf. Proc.* **2001**, Vol. 590, p. 413
 150. W. Plank, T. Pichler, S. Baes-Fischlmair, M. Krause, H. Kuzmany, **N. Tagmatarchis**, H. Shinohara, “Is there a monomeric phase for the heterofullerene C₅₉N?”, *AIP Conf. Proc.* **2001**, Vol. 590, 417
 151. W. Plank, T. Pichler, S. Baes-Fischlmair, M. Krause, H. Kuzmany, **N. Tagmatarchis**, H. Shinohara, “Thermal stability of the heterofullerene (C₅₉N)_x (x = C₅₉N, H, OH)”, *AIP Conf. Proc.* **2001**, Vol. 591, p. 16
 152. **N. Tagmatarchis**, G. S. Forman, H. Shinohara, “Hetero- and homo- [70]fullerene dimers: (C₆₉N)₂ and (C₇₀)₂”, *AIP Conf. Proc.* **2001**, Vol. 591, p. 29
 153. I. Marenne, P. Rudolf, J. Schiessling, P. A. Bruhwiler, C. Silien, J. Auerhammer, T. Pichler, M. S. Golden, **N. Tagmatarchis**, K. Prassides, “Investigations of thick films of C₅₉N doped with alkali metal”, *AIP Conf. Proc.* **2001**, Vol. 591, p. 43
 154. **N. Tagmatarchis**, H. Shinohara, “Photosensitized oxygenation of alkenes in the presence of heterofullerenes and endohedral metallofullerenes”, *ECS Conf. Proc.* **2001**, Vol. 11, p. 216
 155. **N. Tagmatarchis**, A. Taninaka, H. Shinohara, M. Prato, “Production and EPR characterization of exohedrally perfluoroalkylated paramagnetic lanthanum metallofullerenes: A fluorine phase approach”, *AIP Conf. Proc.* **2002**, Vol. 633, p.12
 156. V. Georgakilas, **N. Tagmatarchis**, D. Voulgaris, M. Prato, A. Kukovecz, H. Kuzmany, A. Hirsch, F. Zerbetto, M. Melle-Franco, “Organic functionalized carbon nanotubes”, *AIP Conf. Proc.* **2002**, Vol. 633, p.73
 157. V. Georgakilas, **N. Tagmatarchis**, D. Voulgaris, D. Tasis, M. Prato, D. M. Guldi, M. Melle-Franco, F. Zerbetto, “Fullerene-based morphologically organized superstructures and soluble functionalized carbon nanotubes materials”, *ECS Conf. Proc.* **2002**, Vol. 12, p.82
 158. D. Tasis, **N. Tagmatarchis**, V. Georgakilas, D. Pantarotto, L. Vaccari, A. Bianco, D. M. Guldi, M. Prato, “Organic functionalization of carbon nanotubes”, *AIP Conf. Proc.* **2003**, 685, 282
 159. **N. Tagmatarchis**, V. Georgakilas, D. Tasis, M. Prato, H. Shinohara, “Sidewall electrophilic functionalization of carbon nanotubes”, *AIP Conf. Proc.* **2003**, 685, 287
 160. D. Tasis, **N. Tagmatarchis**, V. Georgakilas, M. Prato, D. Pantarotto, A. Bianco, D. M. Guldi, “Applications of soluble carbon nanotubes”, *ECS Conf. Proc.* **2003**, Vol. 12, p.264

161. Th. Felekis, N. **Tagmatarchis**, A. Zattoni, P. Reschiglian, M. Prato, “Flow field-flow fractionation for length separation and purification of water-soluble functionalized MWNTs”, *AIP Conf. Proc.* **2005**, 786, 252
162. D. M. Guldi, G. M. A. Rahman, N. Jux, D. Balbinot, U. Hartnagel, N. **Tagmatarchis**, M. Prato, “Carbon nanotube nanocomposites: Quasi 1-dimensional structures for electron transfer”, *SPIE—Fullerenes and Photonics* **2005**, Vol. 5929, p.1

C. Book Chapters

163. N. **Tagmatarchis**, M. Prato, “Organofullerene materials”, In *Structure and Bonding Vol. 109*, Springer-Verlag, Berlin, Germany, “Fullerene-based materials”, Ed. K. Prassides, **2004**, Chapter 1, p.1
164. A. Mateo-Alonso, N. **Tagmatarchis**, M. Prato, “Fullerenes and their derivatives”, In *Nanomaterials Handbook*, Ed. Y. Gogotsi, CRC Press, Taylor & Francis Group LLC, Florida, USA, **2006**, Chapter 3, p. 40
165. A. Mateo-Alonso, N. **Tagmatarchis**, M. Prato, “Fullerenes and their derivatives”, In *Carbon Nanomaterials*, Advanced Materials Series, Ed. Y. Gogotsi, CRC Press, Taylor & Francis Group LLC, Florida, USA, **2006**, Chapter 1, p. 1
166. G. Pagona, N. **Tagmatarchis**, “Functionalization of carbon nanohorns”, in *Advances in Carbon Nanomaterials*, PanStanford Press, Singapore, **2012**, Chapter 6, p. 239.
167. N. Karousis, S. P. Economopoulos, N. **Tagmatarchis**, “Functionalization of graphene”, in *Handbook of Carbon Nano Materials: Materials and Fundamental Applications*, Eds. F. D’Souza, K. M. Kadish, World Scientific, Singapore, **2012**, Vol. 4, Chapter 1, p. 1.

D. Book Edited

168. *Advances in Carbon Nanomaterials: Synthesis and Applications*, Ed. N. **Tagmatarchis**, 9 Chapters, 400 pages, PanStanford Press, Singapore, **2012**

E. Monograph

169. H. Shinohara and N. **Tagmatarchis**, *Endohedral metallofullerenes: Fullerenes with metal inside*, John Wiley & Sons Ltd, **2013**, In Press (approx. 500 pages)

F. Patents

170. D. Voiry, G. Pagona, N. **Tagmatarchis**, A. Penicaud, “*Solutions of Carbon Nanohorns, Method for Making Same and Uses Thereof*”, **European Patent**, EP 2 392 546 A1 (December 7, 2011)
171. D. Voiry, G. Pagona, N. **Tagmatarchis**, A. Penicaud, “*Solutions of Carbon Nanohorns, Method for Making Same and Uses Thereof*”, **International Patent**, WO 2011/154894 A1 (December 15, 2011)
172. D. Voiry, G. Pagona, N. **Tagmatarchis**, A. Penicaud, “*Solutions of Carbon Nanohorns, Method for Making Same and Uses Thereof*”, **American Patent**, US 2013/0203862 A1 (August 8, 2013)