# Nikos Tagmatarchis

## Publications List

### A. Peer-Reviewed Refereed Journals

**1995-1998**

1. H. E. Katerinopoulos, **N. Tagmatarchis**, G. Zaponakis, N. Kefalakis, K. Kordatos, E. Spyrakis, 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-(Iodopropenyl)-octahydrobenzo[f]– and –[g]quinolines: Synthesis and adrenergic and dopaminergic activity studies", *J. Med. Chem.* **1998**, *41*, 4165.

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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 $C_{59}N$: 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 ($C_{84}$)", *Chem. Commun.* **1999**, 1023.
6. H. Kuzmany, W. Plank, J. Winter, O. Dubay, **N. Tagmatarchis**, K. Prassides, "Raman spectrum and stability of $(C_{59}N)_2$", *Phys. Rev. B* **1999**, *60*, 1005.
7. F. Simon, D. Arcon, **N. Tagmatarchis**, S. Garaj, L. Forro, K. Prassides, "ESR signal in azafullerene $(C_{59}N)_2$ 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, "$C_{59}N$ 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 $C_{59}N$ on Si(100)–2x1", *Appl. Phys. Lett.* **1999**, *75*, 1074.

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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 $C_{59}N$ 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 $(C_{60}^{-})_2$ and $(C_{59}N)_2$", *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.
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14. **N. Tagmatarchis**, H. Shinohara, T. Pichler, M. Krause, H. Kuzmany, "Electronic absorption and vibration spectroscopy of azafullerene $C_{59}HN$ and its oxide $C_{59}HNO$", *J. Chem. Soc. Perkin Trans. 2* **2000**, 2361.
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15. **N. Tagmatarchis**, E. Aslanis, H. Shinohara, K. Prassides, "Isolation and spectroscopic study of a series of mono- and di-erbium $C_{82}$ and $C_{84}$ endohedral metallofullerenes", *J. Phys. Chem. B* **2000**, *104*, 11010.
    DOI: 10.1021/jp001498u
16. **N. Tagmatarchis**, K. Okada, T. Tomiyama, H. Shinohara, "Synthesis and spectroscopic characterization of the second isomer of $(C_{69}N)_2$ (II) heterofullerene", *Synlett.* **2000**, 1761.

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17. J. M. Auerhammer, T. Kim, M. Knupfer, M. S. Golden, J. Fink, **N. Tagmatarchis**, K. Prassides, "Vibrational and electronic excitations of $(C_{59}N)_2$", *Solid State Commun.* **2001**, *117*, 697.
18. T. Pichler, H. Kuzmany, **N. Tagmatarchis**, K. Prassides, "Phases for the azafullerides $Rb_xC_{59}N$", *Phys. Rev. B* **2001**, *63*, 140301.
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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 endohedral metallofullerenes: Production, separation, isolation and spectroscopic study", *Chem. Mater.* **2001**, *13*, 2374.
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22. **N. Tagmatarchis**, H. Kato, H. Shinohara, "Novel singlet oxygen generators: Endohedral metallofullerenes $M@C_{82}$ (M= Dy, Gd, La) and $Dy_2@C_{2n}$ (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.
    DOI: 10.1039/b103522n
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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 $(C_{59}N)_2$ and hydroazafullerene $C_{59}HN$: Product analysis, emission of singlet oxygen and transient absorption spectroscopy", *J. Org. Chem.* **2001**, *66*, 8026.
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26. I. Sanakis, **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@$C_{82}$", *J. Am. Chem. Soc.* **2001**, *123*, 9924.
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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 $(C_{59}N)_2$ as studied by IR and Raman spectroscopy", *J. Phys. Chem. B* **2001**, *105*, 11964.
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28. G. S. Forman, **N. Tagmatarchis**, H. Shinohara, "Novel solid state synthesis and characterization of $(C_{70})_2$ dimers", *J. Am. Chem. Soc.* **2002**, *124*, 178.
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29. **N. Tagmatarchis**, G. S. Forman, A. Taninaka, H. Shinohara, "Cross-fullerene dimers $(C_{60})(C_{70})$: 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@$C_{82}$)-$(C_8F_{17})_2$", *Chem. Phys. Lett.* **2002**, *355*, 226.
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32. **N. Tagmatarchis**, V. Georgakilas, M. Prato, H. Shinohara, "Sidewall functionalization of single-walled carbon nanotubes through electrophilic addition", *Chem. Commun.* **2002**, 2010.
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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.
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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.
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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.
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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.
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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.
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41. **N. Tagmatarchis**, M. Prato, "Functionalization of carbon nanotubes via 1,3-dipolar cycloaddition", *J. Mater. Chem*. **2004**, *14*, 437.
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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.
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43. R. Kumashiro, K. Tanigaki, H. Ohhashi, **N. Tagmatarchis**, H. Kato, H. Shinohara, T. Akasaka, K. Kato, S. Aoyagi, S. Kimura, M. Takata, "Azafullerene $(C_{59}N)_2$ thin-film field effect transistors", *Appl. Phys. Lett*. **2004**, *84*, 2154.
44. **N. Tagmatarchis**, M. Prato, "Organofullerene materials", *Struct. Bond*. **2004**, *109*, 1.
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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: $C_{82}$-$C_{2v}$, Dy@$C_{82}$(I), $Dy_2$@$C_{82}$(I), $C_{92}$-

$C_2$, $Er_2@C_{92}$(IV)",*Chem. Phys. Lett*. **2004**, *394*, 14.
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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.
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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.
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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.
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60. **N. Tagmatarchis**, M. Prato, D. M. Guldi, "Soluble carbon nanotubes ensembles for light-induced electron transfer interactions", *Physica E* **2005**, *29*, 546.
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62. D. Tasis, **N. Tagmatarchis**, A. Bianco, M. Prato, "Chemistry of carbon nanotubes", *Chem. Rev*. **2006**, *106*, 1105.
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63. F. Bondino, C. Cepek, **N. Tagmatarchis**, M. Prato, H. Shinohara, A. Goldoni, "Element-specific probe of the magnetic and electronic properties of Dy *incar*-fullerenes", *J. Phys. Chem. B* **2006**, *110*, 7289.
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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 $C_{59}HN$", *Carbon* **2006**, *44*, 1420.
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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 $C_{84}$, $C_{84}$-$D_2$(IV) and $C_{84}$-$D_{2d}$(II)", *Chem. Phys. Lett.* **2006**, *425*, 110.
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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.
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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.
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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.
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80. G. Mountrichas, S. Pispas, **N. Tagmatarchis**, "Grafting living polymers onto carbon

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