

Elenco pubblicazioni del Dott. Andrea Lapi

1) Formation of quinones in the iron porphyrin catalysed oxidation of benzene and alkylbenzenes by magnesium monoperoxyphthalate.

E. Baciocchi, O. Lanzalunga, A. Lapi *Tetrahedron Letters*, **1995**, 36, 3547.

2) Tetrapyrrolic macrocycles: novel synthetic processes and applications.

T. Boschi, S. Licocchia, R. Paolesse, P. Tagliatesta, K. M. Smith, A. D'Amico, C. Di Natale, E. Baciocchi, C. Galli, A. Lapi, R. Saladino, R. Bernini, E. Mincione in *Synthesis and Methodology in Inorganic Chemistry*, Editors: S. Daolio, E. Tondello, P. A. Vigato. Vol. 6, 1996, p. 32

3) Epoxidation and hydroxylation reactions catalyzed by the manganese and iron complexes of 5,10,15,20-tetrakis(2,6-dimethoxyphenyl)porphyrin.

E. Baciocchi, T. Boschi, C. Galli, A. Lapi, P. Tagliatesta *Tetrahedron*, **1997**, 53, 4497-4502

4) Epoxidation and Hydroxylation Reactions Catalysed by β -Tetrahalogeno and β -Octahalogeno Manganese Porphyrins.

E. Baciocchi, T. Boschi, L. Cassioli, C. Galli, A. Lapi, P. Tagliatesta *Tetrahedron Letters*, **1997**, 38, 7283-7286.

5) Kinetic Deuterium Isotope effect Profiles and Substituents Effects in the Oxidative *N*-Demethylation of *N,N*-Dimethylanilines Catalyzed by Tetrakis(pentafluorophenyl)porphyrin Iron(III) Chloride.

E. Baciocchi, O. Lanzalunga, A. Lapi, L. Manduchi *J. Am. Chem. Soc.* **1998**, 120, 5783-5787.

6) Oxidation of *N*-Methyl-9-*t*-butylacridane by Iodosylbenzene Catalyzed by Tetrakis(pentafluorophenyl) Porphyrin Iron(III). A Tool to Investigate the Mechanism of the Biomimetic *N*-Demethylation of Aromatic Tertiary Amines.

E. Baciocchi, A. Lapi *Tetrahedron. Lett.* **1999**, 40, 5425-5428

7) Electronic Effects on the Stereoselectivity of Epoxidation Reactions Catalyzed by Manganese Porphyrins.

E. Baciocchi, T. Boschi, L. Cassioli, C. Galli, L. Jaquinod, A. Lapi, R. Paolesse, K. M. Smith, P. Tagliatesta *Eur. J. Org. Chem.* **1999** 3281-3286

8) Oxidative *N*-demethylation of *N,N*-dimethylanilines Catalysed by Lignin Peroxidase: a Mechanistic Insight by a Kinetic Deuterium Isotope Effect Study.

E. Baciocchi, M. F. Gerini, O. Lanzalunga, A. Lapi, S. Mancinelli, P. Mencarelli *Chem. Commun.* **2000**, 393-394

9) Isotope Effect Profiles in the Oxidative *N*-demethylation of *N,N*-dimethylanilines Catalysed by Lignin Peroxidase and a Chemical Model.

E. Baciocchi, M.F. Gerini, O. Lanzalunga, A. Lapi, M. G. Lo Piparo, S. Mancinelli *Eur. J. Org. Chem.* **2001**, 2305-2310.

10) Guanine Oxidation in Double Stranded DNA by MnTMPyP/KHSO₅: at Least Three independent Reaction Pathways.

A. Lapi, G. Pratviel, B. Meunier *Metal-based Drugs* special issue dedicated to the late Marc Leng **2001**, 8, 47-56

- 11) ^{18}O Incorporation in the Oxidation of *N*-Methylcarbazole by Lignin Peroxidase and a Model Compound: a Mechanistic Insight into the Oxidative *N*-Demethylation of Aromatic Tertiary Amines.
E. Baciocchi, M. F. Gerini, A. Lapi *Chem. Commun.* **2002**, 946-947.
- 12) Mechanism of the oxidation of aromatic sulfides catalysed by a water soluble iron porphyrin.
E. Baciocchi, M. F. Gerini, O. Lanzalunga, A. Lapi, M. G. Lo Piparo *Org. Biomol. Chem.* **2003**, 1, 422-426.
- 13) Electron Transfer and Singlet Oxygen Mechanisms in the Photooxygenation of Dibutyl Sulfide and Thioanisole in MeCN Sensitized by *N*-Methylquinolinium Tetrafluoroborate and 9,10-Dicyanoanthracene. The Probable Involvement of a Thiadioxirane Intermediate in Electron Transfer Photooxygenations
E. Baciocchi, T. Del Giacco, F. Elisei, M. F. Gerini, M. Guerra, A. Lapi, P. Liberali *J. Am. Chem. Soc.* **2003**, 125, 16444-16454
- 14) Synthesis of Sulfoxides by the Hydrogen Peroxide Induced Oxidation of Sulfides Catalyzed by Iron Tetrakis(pentafluorophenyl)porphyrin: Scope and Chemoselectivity.
E. Baciocchi, M. F. Gerini, A. Lapi *J. Org. Chem.* **2004**, 69, 3586-3589
- 15) Steady State and Laser Flash Photolysis Study of the Carbon-Carbon Bond Fragmentation Reactions of 2-Arylsulfanyl Alcohol Radical Cations.
E. Baciocchi, T. Del Giacco, F. Elisei, M. F. Gerini, A. Lapi, P. Liberali, B. Uzzoli *J. Org. Chem.* **2004**, 69, 8323-8330.
- 16) Oxygenation of Benzyl dimethylamine by Singlet Oxygen. Products and Mechanism
E. Baciocchi, T. Del Giacco, A. Lapi *Org. Lett.* **2004**, 6, 4791-4794
- 17) Sulfur Radical Cations. Kinetic and Product Study of the Photoinduced Fragmentation Reactions of (Phenylsulfanylalkyl)trimethylsilanes and Phenylsulfanylacetic Acid Radical Cations.
E. Baciocchi, T. Del Giacco, F. Elisei, A. Lapi *J. Org. Chem.* **2006**, 71, 853-860
- 18) Dual Pathways for the Desilylation of Silylamines by Singlet Oxygen.
E. Baciocchi, T. Del Giacco, A. Lapi *Org. Lett.* **2006**, 8, 1783-1786
- 19) Quenching of Singlet Oxygen by Tertiary Aliphatic Amines. Structural Effects on Rates and Products.
E. Baciocchi, T. Del Giacco, A. Lapi *Helv. Chem. Acta* **2006**, 89, 2273.
- 20) The Singlet Oxygen Oxidation of Chlorpromazine and Some Phenothiazine Derivatives. Products and Reaction Mechanisms.
E. Baciocchi, T. Del Giacco, O. Lanzalunga, A. Lapi, D. Raponi. *J. Org. Chem.* **2007**, 72, 5912.
- 21) Singlet Oxygen Promoted Carbon-Heteroatom Bond Cleavage in Dibenzyl Sulfides and Tertiary Dibenzylamines. Structural Effects and the Role of Exciplexes.
E. Baciocchi, T. Del Giacco, O. Lanzalunga, A. Lapi
J. Org. Chem. **2007**, 72, 9582.

- 22) Probing the Compound I-like Reactivity of a Bare High-Valent Oxo Iron Porphyrin Complex: The Oxidation of Tertiary Amines.
B. Chiavarino, R. Cipollini, M. E. Crestoni, S. Fornarini, F. Lanucara, A. Lapi
J. Am. Chem. Soc. **2008**, *130*, 3208.
- 23) X-ray Absorption Spectroscopy of Hemes and Hemeproteins in Solution: Multiple Scattering Analysis
P. D'Angelo, A. Lapi, V. Migliorati, A. Arcovito, M. Benfatto, O. M. Roscioni, W. Meyer-Klaucke, S. Della Longa
Inorg. Chem. **2008**, *47* 9905.
- 24) Stereochemistry of the C-S bond Cleavage in *cis*-2-Methylcyclopentyl Phenyl Sulfoxide Radical Cation.
E. Baciocchi, O. Lanzalunga, A. Lapi, L. Maggini
J. Org. Chem. **2009**, *74*, 1805.
- 25) Reaction of Singlet Oxygen with Thioanisole in Ionic Liquids: a Solvent Induced Mechanistic Dichotomy.
E. Baciocchi, C. Chiappe, T. Del Giacco, C. Fasciani, O. Lanzalunga, A. Lapi, B. Melai
Org. Lett. **2009**, *11*, 1413.
- 26) Reaction of Singlet Oxygen with Thioanisole in Ionic-liquid-Acetonitrile Binary Mixtures.
E. Baciocchi, C. Chiappe, C. Fasciani, O. Lanzalunga, A. Lapi
Org. Lett. **2010**, *12*, 5116.
- 27) *N*-Demethylation of *N,N*-Dimethylanilines by the Benzotriazole *N*-Oxyl Radical: Evidence for a Two-Step Electron Transfer-Proton Transfer Mechanism
E. Baciocchi, M. Bietti, O. Lanzalunga, A. Lapi, D. Raponi
J. Org. Chem. **2010**, *75*, 1378.
- 28) One-electron oxidation of ferrocenes by short-lived *N*-oxyl radicals. The role of structural effects on the intrinsic electron transfer reactivities.
E. Baciocchi, M. Bietti, C. D'Alfonso, O. Lanzalunga, A. Lapi, M. Salamone
Org. Biomol. Chem. **2011**, *9*, 4085.
- 29) Recent photo- and radiation chemical studies of sulfur radical cations.
O. Lanzalunga, A. Lapi
Journal of Sulfur Chemistry, **2012**, *33*, 101-129.
- 30) Accelerating effect of imidazolium ionic liquids on the singlet oxygen promoted oxidation of thioethers: A theoretical study.
C. S. Pomelli, C. Chiappe, A. Lapi
J. Photochem, Photobiol. A: Chemistry **2012**, *240*, 59-65.
- 31) Comparing the catalytic efficiency of ring substituted 1-hydroxybenzotriazoles as laccase mediators.
C. D'Alfonso, O. Lanzalunga, A. Lapi, R. Vadala
Tetrahedron **2014**, *70*, 3049-3055.

32) Vaporization of the prototypical ionic liquid BMImNTf₂ under equilibrium conditions: a multitechnique study.

B. Brunetti, A. Cicciooli, G. Gigli, A. Lapi, N. Misceo, L. Tanzi, S. Vecchio Cipriotti
Phys. Chem. Chem. Phys. **2014**, *16*, 15653-15661.

33) Chiral *N*-Hydroxybenzamides as Potential Catalysts for Aerobic Asymmetric Oxidations

M. G. Capraro, P. Franchi, O. Lanzalunga, A. Lapi, M. Lucarini
J. Org. Chem. **2014**, *79*, 6435-6443.

34) Photosensitized Oxidation of Aryl Benzyl Sulfoxides. Evidence for Nucleophilic Assistance to the C-S Bond Cleavage of Aryl Benzyl Sulfoxide Radical cation.

T. Del Giacco, O. Lanzalunga, A. Lapi, M. Mazzonna, P. Mencarelli
J. Org. Chem. **2015**, *80*, 2310-2318.

35) Isotope effect profiles in the *N*-demethylation of *N,N*-dimethylanilines: a key to determine the pK_a of nonheme Fe(III)-OH complexes.

A. Barbieri, M. De Gennaro, S. Di Stefano, O. Lanzalunga, A. Lapi, M. Mazzonna, G. Olivo, B. Ticconi
Chem. Commun. **2015**, *51*, 5032—5035.

36) C-H Bond Oxidation Catalyzed by an Imine-Based Iron Complex: A Mechanistic Insight.

G. Olivo, M. Nardi, D. Vidal, A. Barbieri, A. Lapi, L. Gomez, O. Lanzalunga, M. Costas, S. Di Stefano
Inorg. Chem. **2015**, *54*, 10141–10152.

37) Oxidation of Aryl Diphenylmethyl Sulfides Promoted by a Nonheme Iron(IV)-Oxo Complex: Evidence for an Electron Transfer-Oxygen Transfer Mechanism.

Barbieri, A., De Carlo Chimienti, R., Del Giacco, T., Di Stefano, S.; Lanzalunga, O., Lapi, A.; Mazzonna, M.; Olivo, G., Salamone, M.
J. Org. Chem. **2016**, *81*, 2513-2520.

38) Thermodynamic study on six tricyclic nitrogen heterocyclic compounds by thermal analysis and effusion techniques.

B. Brunetti, S. Vecchio Cipriotti, A. Lapi
Thermochimica Acta **2016**, *636*, 71-84.

39) Structural properties of geminal dicationic ionic liquid/water mixtures: a theoretical and experimental insight

A. Serva, V. Migliorati, A. Lapi, G. Aquilanti, A. Arcovito, P. D'Angelo
Phys. Chem. Chem. Phys., **2016**, *18*, 16544-16554.

40) Unveiling the complex network of interactions in Ionic Liquids: a combined EXAFS and Molecular Dynamics approach

A. Serva, V. Migliorati, A. Lapi, P. D'Angelo
Journal of Physics: Conference Series **2016**, *712*, 012135

- 41) Electron Transfer Mechanism in the Oxidation of Aryl 1-Methyl-1-phenylethyl Sulfides Promoted by Nonheme Iron(IV)–Oxo Complexes: The Rate of the Oxygen Rebound Process
A. Barbieri, T. Del Giacco, S. Di Stefano, Os. Lanzalunga, A. Lapi, M. Mazzonna, G. Olivo
J. Org. Chem. **2016**, *81*, 12382–12387.
- 42) Kinetic Study of the Reaction of the Phthalimide-N-oxyl Radical with Amides: Structural and Medium Effects on the Hydrogen Atom Transfer Reactivity and Selectivity
M. Bietti, V. Forcina, O. Lanzalunga, A. Lapi, T. Martin, M. Mazzonna, M. Salamone
J. Org. Chem. **2016**, *81*, 11924–11931.
- 43) Role of electron transfer processes in the oxidation of aryl sulfides catalyzed by nonheme iron complexes
A. Barbieri, S. Di Stefano, O. Lanzalunga, A. Lapi, M. Mazzonna, G. Olivo
Phosphorus, Sulfur, and Silicon and the Related Elements, **2017**, *192*, 241-244.
- 44) Toward the Elucidation of the Competing Role of Evaporation and Thermal Decomposition in Ionic Liquids: A Multitechnique Study of the Vaporization Behavior of 1-Butyl-3-methylimidazolium Hexafluorophosphate under Effusion Conditions
V. Volpe, B. Brunetti, G. Gigli, A. Lapi, S. Vecchio Cipriotti, A. Ciccioli
J. Phys. Chem. B, **2017**, *121*, 10382–10393
- 45) Hydrogen Atom Transfer (HAT) Processes Promoted by the Quinolinimide-N-oxyl Radical. A Kinetic and Theoretical Study
G. A. Di Labio, P. Franchi, O. Lanzalunga, A. Lapi, F. Lucarini, M. Mazzonna, V. K. Prasad, B. Ticconi
J. Org. Chem., **2017**, *82*, 6133–6141
- 46) Aerobic Oxidation of 4-Alkyl-N,N-dimethylbenzylamines Catalyzed by N-Hydroxyphthalimide: Protonation-Driven Control over Regioselectivity
M. Bietti, O. Lanzalunga, A. Lapi, T. Martin, M. Mazzonna, M. Polin, M. Salamone
J. Org. Chem., **2017**, *82*, 5761–5768.
- 47) On the coordination of Zn²⁺ ion in Tf₂N⁻ based ionic liquids: Structural and dynamic properties depending on the nature of the organic cation.
F. Sessa, V. Migliorati, A. Serva, A. Lapi, G. Aquilanti, G. Mancini, P. D'angelo
Phys. Chem. Chem. Phys. **2018**, *20*, 2662-2675.
- 48) Influence of Counterions on the Hydration Structure of Lanthanide Ions in Dilute Aqueous Solutions.
V. Migliorati, A. Serva, F. Sessa, A. Lapi, P. D'Angelo
J. Phys. Chem. B **2018**, *122*, 2779-2791.
- 49) Oxidative functionalization of aliphatic and aromatic amino acid derivatives with H₂O₂ catalyzed by a nonheme imine based iron complex.
B. Ticconi, A. Colcerasa, S. Di Stefano, O. Lanzalunga, A. Lapi, M. Mazzonna, G. Olivo
RSC Adv. **2018**, *8*, 19144-19151.

50) Ce³⁺ and La³⁺ ions in ethylammonium nitrate: A XANES and molecular dynamics investigation.

F. Sessa, V. Migliorati, A. Lapi, P.D'Angelo

Chem. Phys. Lett. **2018**, *706*, 311–316.