

Silvia Mazzega Sbovata

Education

- Since december 2002: Ph.D student in Tecnologie Chimiche, Università di Trento, Italy. Thesis Title: “Synthesis and characterization of Pt(II) and Pd(II) electrophilic complexes, with electron withdrawing ligands for selected stoichiometric and catalytic processes”. Supervisors: prof. R. A. Michelin, prof.ssa R. Bertani, Università di Padova, Italy.
- **Chemist Qualifying Examination**
Second section 2003.
- 1995-2002: **Degree in Chemistry**, Università di Padova, Italy.
Thesis Title: “Synthesis and biological activity of Pt(II) complexes bearing amidine ligands”. Supervisors: prof. M. Basato and prof. R. A. Michelin, Università di Padova, Italy.
- march-september 2000: **Erasmus Scholarship**, IST, Lisbon, Portugal.
Research Project with the title “Dichloro(bis)propanenitrile platinum(II) as suitable intermediate in platinum(IV) chemistry” spent in the laboratories of Istituto Superior Tecnico; supervisor: prof. A. J. L. Pombeiro.

Research Experience

- Synthesis and characterisation of Pt(II) complexes with nitrile ligands (acetonitriles, benzonitriles and benzyl-nitriles). Reactions with primary, secondary amines, ammonia and alcohols: synthesis and characterization of amidine and iminoether complexes and *in vitro* antitumor activity and cellular pharmacological properties of some of these complexes.
- Synthesis of cationic platinum(II) complexes with hemilabile phosphane-phosphine oxide ligands [bis-(diphenylphosphino) methane monoxide], and with electron-poor diphosphine ligands [P(PMe)₂CH₂CH₂P(OMe)₂]. Spectroscopic, structural characterisation and catalytic properties in the Baeyer-Villiger oxidation of ketones with hydrogen peroxide.
- Synthesis of Pt(II) and Pd(II) complexes bearing perfluorinated ligands of the type [PdMe(C₃F₇)(tmeda)].

Work Experience

- **Grant: Marie-Curie fellowship**
July 2004– February 2005; theme: “Transition metal chemistry and catalysis in aqueous media”, supervisor: prof. A. J. Pombeiro; Instituto Superior Tecnico, Universit  Tecnica de Lisboa, Portugal.
- **Grant**
January 2004 - june 2004; theme: “Fluorinated fosfazene compounds”; supervisor: prof.ssa R. Bertani; Department of Chemical Processes, Universit  di Padova.
- **Grant**
December 2002 - december 2003; theme: “Metal-transition organometallic compounds bearing fluorinated ligands”; supervisor: prof.ssa R. Bertani; Department of Chemical Processes, Universit  di Padova.

Scientific Skills

- Ability to work with high vacuum techniques using standard Schlenk techniques, under inert gas atmosphere.
- Nuclear Magnetic Resonance: multinuclear (¹H, ¹³C, ³¹P, ¹⁹F); coupling and decoupling.
- Infrared Spectrometry (far e medium IR).
- UV-Vis Spectrometry.

Linguistic Skills

- English: reading skills, good, writing skills, good, verbal skills, good.
- Portuguese: reading skills, good, writing skills, good, verbal skills, good.

Technical Skills

- Systems: Windows, Linux.
- Programs: Word, Excel, Origin, Access, Power Point, Photoshop, CorelDraw, ChemWin, ChemDraw, IsisDraw, WinNMR, gNMR, Netscape.

Scientific Contribution

Publications

- R. Bertani, R. Seraglia, D. Favretto, R. A. Michelin, M. Mozzon, **S. Mazzega Sbovata**, A. Sassi, “Electrospray mass spectrometry of Pt(II) amidine complexes of the type cis- and trans-[PtCl₂{NH=C(R)NR'R''}]₂ and trans-[PtCl₂(RCN){NH=C(R)NR'R''}]”, *Inorganica Chimica Acta*, 356 (2003) 357-364.
- M. Basato, F. Benetollo, G. Facchin, R. A. Michelin, M. Mozzon, S. Pugliese, P. Sgarbossa, **S. Mazzega Sbovata**, A. Tassan, “The Staudinger

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- reaction of platinum (II)- and palladium(II)-coordinated 2-(azidomethyl)phenyl isocyanide. X-ray structure of *trans*-[PtCl{CN(H)C₆H₄-2-CH₂NH}(PPh₃)₂][BF₄] · CDCl₃ · H₂O”, *Journal of Organometallic Chemistry*, 689 (2004) 454-462.
- G. Natile, F.P. Intini, R. Bertani, R. A. Michelin, M. Mozzon, **S. Mazzega Sbovata**, R. Seraglia, A. Venzo, ‘Synthesis and characterisation of the amidine complexes *trans*-[PtCl(NH₃){HN=C(NH₂)R}₂]Cl (R = Me, Ph, CH₂Ph) derived from addition of NH₃ to the coordinated nitriles in *trans*-[PtCl₂(N=CR)₂], *Journal of Organometallic Chemistry*, accepted for publication.
 - R. A. Michelin, **S. Mazzega Sbovata**, R. Bertani, M. Mozzon, ‘Addition of nucleophiles to benzyl-nitrile Pt(II) complexes”, *manuscript in preparation*.
 - R. A. Michelin, **S. Mazzega Sbovata**, R. Bertani, C. Marzano, M. Mozzon, ‘In vitro antitumor activity and cellular pharmacological properties of bis-amidine Pt(II) complexes”, *manuscript in preparation*.

Communications

- P. Sgarbossa, A. Brunetta, G. Strukul, R. A. Michelin, E. Pizzo, R. Ros, **S. Mazzega Sbovata**, A. Tassan, ‘Cationic platinum (II) complexes with electron-poor diphosphine as catalyst for the Baeyer-Villiger oxidation of ketones with hydrogen peroxide”, *VII Italian Seminar on Catalysis*, Venezia, Italy, June 29- July 4, 2003.
- R.A. Michelin, R. Bertani, M. Mozzon, **S. Mazzega Sbovata**, ‘Electrospray mass spectrometry analysis of bis-amidine Pt(II) complexes”, *XXI Congresso Nazionale della Società Chimica Italiana*, Torino, Italy, June 22-27, 2003.
- M. Casarin, R. Bertani, R. A. Michelin, **S. Mazzega Sbovata**, ‘Synthesis and theoretical and experimental characterisation of cis and *trans*-[PtCl₂(NCR)₂] (R = Me, Ph)”, *4th International School of Organometallic Chemistry*, Camerino, Italy, September 6-10, 2003.
- R A. Michelin, E. Pizzo, P. Sgarbossa, **S. Mazzega Sbovata**, G. Strukul, A. Tassan ‘Synthesis of cationic platinum(II) complexes with hemilabile phosphane-phosphine oxide ligands for the Baeyer-Villiger oxidation of ketones” *XIV Congresso Nazionale di Catalisi GIC2004*, Lerici (La Spezia), Italy, June 6-10, 2004.
- R A. Michelin, E. Pizzo, P. Sgarbossa, **S. Mazzega Sbovata**, G. Strukul, A. Tassan ‘Baeyer-Villiger oxidation of ketones by Platinum(II) Lewis acid complexes with coordinated electron-poor diphosphines” *XIV Congresso Nazionale di Catalisi GIC2004*, Lerici (La Spezia), Italy, June 6-10, 2004
- R A. Michelin, R.Bertani, **S. Mazzega Sbovata**, M. Mozzon ‘Synthesis and characterisation, in solution and in the solid state, of Pt(II) amidine complexes obtained by reaction of Pt(II) nitrile complexes with primary, secondary amines and NH₃” *IX Scuola Nazionale per Dottorandi: la Chimica Organometallica e le Tecnologie Avanzate*, Venezia, Italy, June 27-July 1, 2004.