

# **Curriculum Vitae**

**Ioannis Bratsos**

**DECEMBER 2021**

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## PERSONAL INFORMATION

Surname: **BRATSOS**  
 Name: **IOANNIS**  
 Father's Name: EFTHIMIOS  
 Mother's Name: CHRYSOULA  
 Date of Birth: 20-09-1975  
 Place of Birth: PIRAEUS, ATTIKA, GREECE  
 Nationality: GREEK  
 Marital Status: Married/ 2 Children  
 Military obligations: Accomplished (07/05/2008)



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Publons: <https://publons.com/researcher/1324272/ioannis-bratsos/>

## EDUCATION

July 11<sup>th</sup>, 2005 **National and Kapodistrian University of Athens**  
 School of Science, Faculty of Chemistry  
 Department of Inorganic Chemistry  
Ph.D in Chemistry, Grade: "Honors"

April 14<sup>th</sup>, 2003 **National and Kapodistrian University of Athens**  
 School of Science, Faculty of Chemistry  
 Department of Inorganic Chemistry  
M.Sc in Chemistry, Grade: "Honors"

February 10<sup>th</sup>, 2000 **National and Kapodistrian University of Athens**  
 School of Science, Faculty of Chemistry  
B.Sc in Chemistry, Grade: "Good"

March 30<sup>th</sup>, 2000 **National and Kapodistrian University of Athens**  
 School of Science, Faculty of Chemistry  
Diploma in Enology training

1993 **21<sup>o</sup> General Lyceum of Athens (Grava)**  
Graduation Certificate, Grade: "Good"

## EMPLOYMENT

01/07/2021 – today **N.C.S.R. "Demokritos", Institute of Nanoscience and Nanotechnology (I.N.N.)**  
 Researcher C  
 Head of "Functional Inorganic and hybrid NanoStructures" laboratory.

## RESEARCH EXPERIENCE

***Professional***

1/3/2019 – 30/6/2021 **N.C.S.R. "Demokritos", Institute of Nanoscience and Nanotechnology (I.N.N.)**  
 Associate Researcher  
 Objective: "Development and Characterization of new fluorinated crystalline nanoporous metal-organic framework (MOF) and modified analogues".  
 Supervisor: Dr. Theodore Steriotis.

1/2/2018 – 28/2/2019 **EYDAP S.A., Division of Environmental Affairs, Research & Development (Research and Development Department)**  
 Research Associate  
 Objectives: Participation to the european project "*Scale-up of low-carbon footprint MAterial Recovery Techniques for upgrading existing wastewater treatment Plants (SMART-Plant)*".  
 In the frame of this project an innovative wastewater treatment pilot system has been developed at the sewage treatment plant of Psyttalia, that achieves the required quality of treated wastewater, with simultaneous material (nitrogen, phosphorus, biodegradable organic material) and energy (biogas) recovery.

1/5/2013 – 31/1/2018 **N.C.S.R. "Demokritos", Institute of Advanced Materials, Nuclear & Radiological Sciences & Technology, Energy & Safety (I.N.RA.S.T.E.S.)**  
 Research Associate  
 The experimental(synthetic) part of the projects was performed at the lab of Dr. Dionisios Vourloumis (Chemical Biology, I.N.N.), whereas the physicochemical studies were carried out at the lab of Dr. Theodore Steriotis (Membranes and Microporous Materials for Environmental Separations, I.N.N.).

- 10/10/2016 – 31/01/2018  
 [From 10/10/2016 to 31/12/2016 paid employee; From 01/01/2017 έως 31/01/2018 unpaid employee]  
 Objective: "Development of nanoporous materials for gas storage and separations".  
 Scientific Coordinator: Dr. Georgia Charalambopoulou.

- 1/5/2013 – 30/6/2016  
 Objective: "Synthesis and characterization of porous materials as sorbents for gaseous pollutants".  
 Scientific Coordinator: Dr. Konstantinos Eleftheriadis.

1/1/2012 – 30/4/2013 **N.C.S.R. "Demokritos", Institute of Nanoscience and Nanotechnology (I.N.N.)**  
 Laboratory of Chemical Biology of Natural Products and Designed Molecules  
 Associate Researcher  
 Objective: "Synthesis of novel advanced porous metal-organic frameworks (MOFs) for gas storage and separation"  
 Supervisor: Dr. Dionisios Vourloumis  
 Joint Project with the lab of Dr. Theodore Steriotis (Membranes and Microporous Materials for Environmental Separations, I.N.N.)

1/8/2009 - 31/7/2011 **Università Degli Studi di Trieste, Dipartimento di Scienze Chimiche, Italy**  
 PostDoc Position  
 Project: "*Development of new ruthenium-porphyrin conjugates with antitumor activity*".  
 Supervisor: Prof. Enzo Alessio

5/9/2005 – 4/11/2007 **Università Degli Studi di Trieste, Dipartimento di Scienze Chimiche, Italy**  
 PostDoc Position  
 Project: "*New drugs for the treatment of lung cancer: Clinical evaluation of the Ruthenium compound NAMI-A as model for the design of new molecules*".  
 Supervisor: Prof. Enzo Alessio

### **Postgraduate**

1/10/2002 – 7/7/2005 **N.C.S.R. "Demokritos", Institute of Physical Chemistry**  
 Laboratory of Bioinorganic Materials and Biomolecules  
 Research for Ph.D Dissertation  
 Title: "*Synthesis and characterization of Pt(II) and Ru(II) complexes with biologically relevant ligands*"  
 Supervisor: Dr. Nikos Katsaros

1/10 – 31/12/2002 &  
 1/4 – 30/6/2003 **Università Degli Studi di Trieste,  
 Dipartimento di Scienze Chimiche, Italy**  
 Research for a part of Ph.D Dissertation  
 Title: "*Synthesis, characterization and toxicity of Ru(II)-DMSO complexes with dicarboxylate ligands*"  
 Supervisor: Prof. Enzo Alessio.

1/10/2001 – 30/6/2002 **Gorlaeus Laboratories, Department of CBAC, Leiden University, The Netherlands**  
 Research for a part of Ph.D Dissertation  
 Title: "*Solid phase synthesis of Carboplatin analogs*"  
 Supervisor: Prof. Dr Jan Reedijk.

1/10/1999 – 30/9/2002 **N.C.S.R. "Demokritos", Institute of Physical Chemistry**  
 Laboratory of Bioinorganic Materials and Biomolecules  
 Research for a part of M.Sc Dissertation  
 Title: "*Spectroscopic study of the Interaction of Pt(II) and Pd(II) with the anticancer drug Bleomycin*"  
 Supervisor: Dr. Nikos Katsaros

### **Undergraduate**

1998 – 1999 **National and Kapodistrian University of Athens**  
 School of Science, Faculty of Chemistry  
 Department of Inorganic Chemistry and Technology  
 Research for B.Sc Thesis  
 Title: "*Isolation of Metal Ions from Laterite Ores*"  
 Supervisor: Prof. Andreas Tsatsas

### **SHORT TERM SCIENTIFIC MISSIONS**

12/04 – 01/05/2010 **University of Ljubljana, Faculty of Chemistry and Chemical Technology (Slovenia)**  
 Funding: COST Action D39  
 Host-Supervisor: Prof. Iztok Turel

10/1 – 18/2/2005 **Callerio Foundation Onlus, Trieste (Italy)**  
 Funding: European Science Foundation (ESF), COST D20  
 Host-Supervisor: Prof. Gianni Sava

- 3 - 16/5/2004      **Università Degli Studi di Trieste,  
Dipartimento di Scienze Chimiche (Italy)**  
Funding: European Science Foundation (ESF), COST D20  
Host-Supervisor: Prof. Enzo Alessio
- 9 – 20/4/2001      **CERM, Polo Scientifico, University of Firenze (Italy)**  
Funding: Large Scale Facilities (LSF) Program  
Host-Supervisor: Prof. Ivano Bertini.

## TEACHING AND SUPERVISORY EXPERIENCE

### Tutor of undergraduated and postgraduated students

- 2009-2011      **Università Degli Studi di Trieste, Dipartimento di Scienze Chimiche (Italy)**
- Tutor of **three** undergraduate (I. Albin, A. Beltram, G. Ragazzon) and **three** postgraduate (C. Simonin, E. Mitri, S. Calmo) students for their experimental thesis.
  - Tutor of a visiting PhD student (A. Rilak) from the University of Kragujevac (Serbia) hosted to the lab (Trieste) for one year period.
- 2005-2007      **Università Degli Studi di Trieste, Dipartimento di Scienze Chimiche (Italy)**
- Tutor of **three** undergraduate students (G. Birarda, N. Kulisic, F. Ravalico) for their experimental thesis.

### Co-advisor

- Salvatore Simone Calmo (E. Alessio, I. Bratsos), "*Nuovi derivati carbonilici di Rutenio e Osmio*", **2011**, Università Degli Studi di Trieste, Facoltà di Scienze Matematiche, Fisiche e Naturali, Italy. (Tesi di Laurea Specialistica in Chimica; M.Sc. dissertation)
- Alessandro Beltram (E. Alessio, I. Bratsos), "*Sintesi di nuovi complessi di Osmio strutturalmente simili a composti antitumorali di rutenio*", **2011**, Università Degli Studi di Trieste, Facoltà di Scienze Matematiche, Fisiche e Naturali, Italy. (Tesi di Laurea triennale in Chimica, B.Sc. thesis)
- Elisa Mitri (E. Alessio, I. Bratsos), "*Sviluppo di nuovi complessi half-sandwich di Rutenio come potenziali agenti antitumorali*", **2010**, Università Degli Studi di Trieste, Facoltà di Scienze Matematiche, Fisiche e Naturali, Italy. (Tesi di Laurea in Chimica; M.Sc. dissertation)
- Camilla Simonin (E. Alessio, I. Bratsos), "*Studio della reattività di composti antitumorali di Rutenio con geometria half-sandich*", **2009**, Università Degli Studi di Trieste, Dipartimento di Scienze Chimiche, Facoltà di Scienze MM.FF.NN., Italy. (Corso di Laurea Specialistica in Scienze Chimiche, Tesi sperimentale in Chimica; M.Sc. dissertation)
- Irene Albin (T. Gianferrara, T. Da Ros, I. Bratsos), "*Nuovi Coniugati Rutenio(II)-Fullerene con Potenziali Applicazioni in Terapia Fotodinamica*", **2009**, Università Degli Studi di Trieste, Dipartimento di Scienze Farmaceutiche, Facoltà di Farmacia, Italy. (Corso di Laurea Specialistica in Farmacia, Tesi sperimentale in Chimica Farmaceutica, M.Sc. thesis)
- Giovanni Birarda (E. Alessio, E. Zangrando, I. Bratsos), "*Sintesi e caratterizzazione di Nuovi Complessi di Rutenio(II)-dmsO con Leganti Dicarbossilati*", **2006**, Università Degli Studi di Trieste, Dipartimento di Scienze Chimiche, Italy. (Laurea in Chimica; M.Sc. dissertation)

**Teaching**

2015 – today **New York College (Athens, Greece)**  
Bsc (Hons) in Biomedical Sciences and Bsc (Hons) in Human Nutrition (University of Greenwich)  
 Vocational training educator

**Courses**

- Since 2017 **Basic Chemistry for Life Sciences** – Fall Semester (15 credits), Year 1.
- Since 2016 **Practical and Professional Skills - Basic Chemistry for life sciences** – Fall Semester (15 credits), Year 1.
- Since 2017 **Practical and Professional Skills - Biology** – Spring Semester (15 credits), Year 1.
- Since 2017 **General Chemistry** – Spring Semester (15 credits), Foundation (Year 0).
- Since 2015 **Chemistry Laboratory Skills** – Spring Semester (15 credits), Foundation (Year 0).
- Since 2016 **Biology Laboratory Skills** – Fall Semester (15 credits), Foundation (Year 0).

2008-2009 **40<sup>th</sup> High School of Athens (Grava)**  
 Hourly waged teacher of Chemistry (1<sup>st</sup> and 2<sup>nd</sup> Class)

**INDUSTRIAL EXPERIENCE**

Summer 1996 and 1997 **ATHENIAN BREWERY S.A.**  
 Quality Control Department: Chemistry Laboratory  
 Summer training internships

**KNOWLEDGE**

**Languages:** English: Very Good  
Italian: Basic  
Greek: Native language

**Computers:** - Skilled in the use of:

- The Internet in search and use of pertinent information.
- Microsoft Office 2016/365 (Word, Excel, PowerPoint)
- Origin – Statistical analysis programs
- ChemDraw, DS Viewer, Materials Studio, Topos, HyperChem, WinGX, CCP4, ORTEP, Platon, Mercury, WinCoot, VMD, MestReNova etc – Chemistry related softwares
- Photoshop, CorelDraw – graphics related softwares

- Holder of **ECDL Progress Certificate** (Microsoft Word, Microsoft Excel, Internet Explorer – Outlook Express)

- Skilled in the use of platforms for synchronous e-learning (MS Teams, ZOOM, Webex κλπ), and construction of e-classes for asynchronous e-learning (Moodle).

**CONTINUOUS EDUCATION****Summer Schools**

- **XII School on Synchrotron Radiation: Fundamentals, Methods and Applications**

Italian Society of Synchrotron Radiation (Società Italiana di Luce di Sincrotrone, SILS)  
Grado, ITALY, 16 – 27 September 2013

### **Research Seminars**

- **Spectroscopy days**  
Organised by Institute of Nanoscience and Nanotechnology, NCSR “Demokritos”  
Athens, Greece, 9 May – 13 June 2019

### **Teaching Seminars**

- **Annual Staff Development Symposium**  
“Caring in the Learning Environment: Helping Students and Teachers Grow”  
Organised by New York College  
Athens, Greece, October 2017

## **FIELDS OF RESEARCH**

The field of research interest and experience is focused mainly on **Inorganic Chemistry**:

- ◆ Synthesis and characterization - by means of various spectroscopic methods - of coordination compounds, in particular from the group of platinum (Pt(II), Pd(II), Ru(II/III), Os(II)), appropriately designed with specific properties for various applications.
- ◆ Design, synthesis and characterization of complexes of transition metals for their use as building units for the construction of innovative materials such as metal-organic frameworks (MOF's) or Covalent Organic Framework (COF's).
- ◆ Synthesis of metal complexes under special/particular conditions, such as under inert conditions or synthesis via solid phase.
- ◆ Studies on the kinetics (aquation, anation, reaction with biological relevant molecules) and mechanisms of reaction.

### **Bioinorganic Chemistry:**

- ◆ Rational design, synthesis and full characterisation of metal based compounds as potential antitumor agents or in general for medical applications.
- ◆ Study of the interaction of metal ions with biological molecules, such as DNA, oligonucleotides, nucleobases etc., or other biologically relevant molecules, and determination of their structure by means of various spectroscopic methods.
- ◆ Synthesis of porphyrin-Ruthenium conjugates with potential antitumor activity.
- ◆ Study of the pharmacokinetic properties and cytotoxicity of metal based compounds, mainly of Platinum (Pt) and Ruthenium (Ru) based, with potential anticancer activity.

### **Materials:**

- ◆ Development (design, synthesis and characterization by means of various methods) of novel advanced porous Metal-Organic Frameworks (MOF's) and Covalent-Organic Frameworks (COF's), mainly for gas storage and separation applications.
- ◆ Physicochemical studies (e.g. gas sorption) on porous materials.

### **Organic Synthesis:**

- ◆ Synthesis of small organic molecules as linkers or ligands for transition metal complexes.
- ◆ Synthesis of peptides via solid phase synthesis.
- ◆ Separation and purification techniques of organic compounds.



## RELEVANT SCIENTIFIC TECHNIQUES AND SKILLS

### Techniques of synthesis:

- Solution-phase and Solid-phase synthesis.
- Synthesis under inert atmosphere (Schlenk techniques).
- Hydrothermal / Solvothermal Synthesis.

### Techniques of Structural Characterization:

- **X-Ray Crystallography.**
  - Large experience in crystallization methods (More than 50 solved structures).
  - Powder X-Ray Diffraction. User of: RIGAKU RU-H3R
  - Single crystal X-Ray Diffraction. User in Synchrotrons: BESSY (Berlin, Germany), Elettra (Trieste, Italy), ALBA (Barcelona, Spain).
- 1D και 2D Nuclear Magnetic Resonance (**NMR**). User of: Bruker (500 MHz, Avance), Varian (500 MHz, Varian 500) και Jeol (400 MHz, Eclipse 400FT).
- Ultraviolet-Visible Spectroscopy (**UV-Vis**). User of: Jasco (V-500 UV-Vis spectrophotometer), Perkin-Elmer (Lambda 35) και Thermo Spectronic (Helios Alpha).
- Cyclic Dichroism (**CD**) Spectroscopy. User of: Jasco (V-715).
- Infrared (**IR**) Spectroscopy. User of: Perkin-Elmer (2000 NIR FT-Raman, 983G spectrometer and Spectrum 100).
- Mass Spectroscopy (**MS**)
- Thermogravimetric Analysis (**TGA**).
- Scanning Electron Microscope (**SEM**) Imaging and Energy Dispersive Spectroscopy (**EDS**).

## PARTICIPATION IN FUNDED RESEARCH PROJECTS

- ◆ Project: **Action "RESEARCH - CREATE - INNOVATE" - Operational Programme Competitiveness, Entrepreneurship and Innovation 2014-2020 (EPAnEK)**. (T1EDK-00770 MIS: 5031795)  
Title: «Application of Innovative Porous Materials to Industrial Separation/Purification Processes (*PUREGAS*)».  
Scientific Responsible: Dr. Theodore Steriotis  
Participation period: 01/03/2019 – today  
Role: Member of the research group of the Membranes and Materials for Environmental Separations (INN) at NCSR "Demokritos".
- ◆ Project: **H2020-WATER-2014-2015/H2020-WATER-2015-two-stage** (No 690323)  
Title: «Scale-up of low-carbon footprint Material Recovery Techniques for upgrading existing wastewater treatment Plants (*SMART-Plant*)»  
Participation period: 01/02/2018 – 28/02/2019  
Role: Member of the research group of EYDAP S.A. (Division of Environmental Affairs, Research & Development), a project's partner.  
Coordinator: Università Degli Studi di Verona (Italy)
- ◆ Project: **Siemens** (EE-11928)  
Title: «Establishing a Multidisciplinary and Effective Innovation and Entrepreneurship Hub»  
Coordinator: NCSR "Demokritos"  
Scientific Responsible: Dr. Nick Kanellopoulos  
Participation period: 10/10/2016 – 31/12/2016  
Role: Member of the research group of the Environmental Research Laboratory (INRASTES) at NCSR "Demokritos".
- ◆ Project: **FP7-REGPOT-2012-2013-1** (FP7-Regpot)  
Title: «EnTeC – Enhancing the capacity for Environmental Technology and Climate Research»  
Coordinator: NCSR "Demokritos"

Scientific Responsible: Dr. Konstantinos Eleftheriadis  
 Participation period: 01/02/2018 – 28/02/2019  
 Role: Member of the reaserch group of the Environmental Research Laboratory (INRASTES) at NCSR “Demokritos”.

- ◆ Project: **INFRA-2011-1.1.16. - Research Infrastructures for Hydrogen & Fuel Cells facilities (FP7-Infrastructures)**  
 Title: «*H2FC – Integrating European Infrastructure to support science and development of Hydrogen- and Fuel Cell Technologies towards European Strategy for Sustainable, Competitive and Secure Energy*»  
 Scientific Responsible: Dr. Theodore Steriotis  
 Participation period: 01/01/2013 – 30/04/2013  
 Role: Member of the reaserch group of the Membranes and Materials for Environmental Separations (INN) at NCSR “Demokritos”.
  
- ◆ Project: **ENERGY-2007-1.2-04 (FP7-Energy)**  
 Title: «*NanoHy – Novel Nanocomposites for Hydrogen Storage Applications*».  
 Scientific Responsible: Dr. Georgia Charalampopoulou.  
 Participation period: 01/07/2012 – 31/12/2012  
 Role: Member of the reaserch group of the Environmental Research Laboratory (INRASTES) at NCSR “Demokritos”.
  
- ◆ Project: **Marie Curie Excellence Grants - MEXT-CT-2006-039149 (FP6-Mobility).**  
 Title: «*EXPLORNA – Study of RNA components by the synthesis of small molecules*».  
 Scientific Responsible: Dr. Dionisios Vourloumis.  
 Participation period: 01/01/2012 – 15/06/2012  
 Role: Member of the reaserch group of the Chemical Biology Laboratory (INN) at NCSR “Demokritos”.
  
- ◆ Project: **General Secretariat for Research and Technology (G.S.R.T.), Operating Programme “Competitiveness” (Op.Pr.Comp.) 2002 – Measure 4.3.6.1. “Greece – Turkey Bilateral Collaboration”**  
 Title: «*Synthesis of new transition metal based compounds with tetrapyrrole as antitumor agents*»  
 Scientific Responsible: Dr. Nikos Katsaros  
 Participation period: 01/02/2004 – 30/06/2004  
 Role: Member of the reaserch group of the laboratory of Bioinorganic Materials and Biomolecules (IPC) at NCSR “Demokritos”.
  
- ◆ Project: **G.S.R.T., Op.Pr.Comp. 2001 – Measure 4.3.6.1. “Greece – Yugoslavia Bilateral Collaboration”**  
 Title: «*Synthesis and characterization of dinuclear complexes of copper(II) and cobalt(II) with mixed ligands: studies on their application as antibacterial and anticancer drugs*»  
 Scientific Responsible: Dr. Nikos Katsaros  
 Participation period: 01/04/2003 – 31/12/2003  
 Role: Member of the reaserch group of the laboratory of Bioinorganic Materials and Biomolecules (IPC) at NCSR “Demokritos”.

## CONFERENCES

### Oral Presentations (7)

- ◆ I. Bratsos, I. Spanopoulos, G. Ch. Charalambopoulou, D. Vourloumis, T. A. Steriotis and P. N. Trikalitis  
 “New Zr(IV) based metal-organic frameworks functionalized with lewis base sites: synthesis, characterization and gas-sorption properties”  
**6<sup>th</sup> Panhellenic Symposium on Porous Materials**  
 Kavala, GREECE, 9-10 September 2013.

- ◆ I. Bratsos, E. Mitri, C. Simonin, E. Zangrado, E. Alessio  
“Development of new half-sandwich type Ru coordination compounds as potential antitumor agents”  
**Regional Seminar**  
I Giovani e la Chimica in Friuli Venezia Giulia  
Udine, ITALY, 24 May, 2010
- ◆ I. Bratsos, E. Mitri, C. Simonin, E. Zangrado, E. Alessio  
“Development of new half-sandwich Ru coordination compounds as potential antitumor agents”  
**10<sup>th</sup> European Biological Inorganic Chemistry Conference (Eurobic 10)**  
Thessaloniki, GREECE, 22-26 June, 2010
- ◆ I. Bratsos, T. Gianferrara, E. Iengo, B. Milani, A. Oštrić, C. Spagnol, E. Zangrado, E. Alessio  
“Synthetic strategies towards ruthenium-porphyrin conjugates for anticancer activity”  
**COST D39 workshop**  
Debrecen, HUNGARY, 24-25 September, 2009
- ◆ I. Bratsos  
“Chemical features of Ruthenium(II)-DMSO-Dicarboxylato compounds as potential antitumor agents”  
**COST D39 Meeting**  
Leiden, THE NETHERLANDS, 24 - 27 September 2007
- ◆ I. Bratsos, B. Serli, E. Zangrado, E. Alessio  
“Ruthenium-dmso-dicarboxylato complexes: Towards carboNAMI-A”  
**COST D20 Meeting**  
Brno, CZECH REPUBLIC, 15 - 18 June 2006
- ◆ I. Bratsos, B. Serli, E. Zangrado, E. Alessio  
“Novel ruthenium-DMSO complexes with dicarboxylate ligands as potential antitumor drugs”  
**Regional Seminar**  
I Giovani e la Chimica in Friuli Venezia Giulia  
Trieste, ITALY, 5 - 6 May 2006

#### **Posters (14)**

- ◆ I. Bratsos, C. Tampaxis, I. Spanopoulos, N. Demitri, D. Vourloumis, G. Charalambopoulou, P. N. Trikalitis, T. A. Steriotis  
“Synthesis and characterization of a novel heterobimetallic In(II)-Pd(II) Metal-Organic Framework”  
**7<sup>th</sup> Panhellenic Symposium on Porous Materials**  
Ioannina, GREECE, 02-04 June, 2016
- ◆ I. Bratsos, E. Mitri, C. Simonin, E. Zangrado, E. Alessio  
“Development of new half-sandwich type Ru coordination compounds as potential antitumor agents”  
**XXXVIII Congresso Nazionale della Divisione di Chimica Inorganica della Società Chimica Italiana**  
Trieste, ITALY, 13-16 September, 2010
- ◆ I. Bratsos, T. Gianferrara, E. Alessio  
“A rational categorization of metal anticancer compounds based on their mode of action”  
**10<sup>th</sup> International Symposium on Applied Bioinorganic Chemistry (ISABC 10)**  
Debrecen, HUNGARY, 25-28 September, 2009
- ◆ I. Bratsos, M. Casanova, E. Iengo, F. Scandola, M. T. Indelli, E. Alessio  
“Pyridylporphyrins peripherally substituted with luminescent *fac*-[Re(CO)<sub>3</sub>(bipy)]<sup>+</sup> fragments: structural and photophysical investigations”  
**COST D31**  
Organizing Non-Covalent Chemical Systems with Selected Functions  
Athens, GREECE, 28 - 31 March 2007

- ◆ I. Bratsos, B. Serli, E. Zangrando, E. Alessio  
“Synthesis and characterization of a series of Ru<sup>II</sup>-dmsO complexes with dicarboxylate ligands”  
**First European Conference on Chemistry for Life Sciences**  
A meeting of the FECS Discussion Group of Chemistry for Life Sciences - Understanding the chemical mechanisms of life  
Rimini, ITALY, 4 - 8 October 2005
- ◆ I. Bratsos, B. Serli, E. Zangrando, N. Katsaros, E. Alessio  
“Synthesis and characterization of a series of Ru<sup>II</sup>-dmsO complexes with oxalate ligand”  
**8<sup>th</sup> FIGIPAS**  
Meeting in Inorganic Chemistry  
Athens, GREECE, 6 - 9 July 2005
- ◆ I. Bratsos, E. Zangrando, N. Katsaros, E. Alessio  
“Synthesis and characterization of novel Ru<sup>II</sup>-dmsO complexes with dicarboxylate ligands”  
**7<sup>th</sup> European Biological Inorganic Chemistry Conference (EUROBIC 7)**  
Garmisch - Partenkirchen, GERMANY, 29 August – 2 July 2004
- ◆ I. Bratsos, E. Zangrando, N. Katsaros, E. Alessio  
“NMR studies of the chemical behaviour in aqueous solution of novel Ru<sup>II</sup>-dmsO complexes with dicarboxylate ligands”  
**COST D20 Conference**  
Metal Compounds in the Treatment of Cancer and Viral diseases  
Garmisch - Partenkirchen, GERMANY, 27 - 28 August 2004
- ◆ I. Bratsos, A. Papakyriakou, N. Katsaros  
“Spectroscopic studies on the interaction of the antitumor drug Bleomycin with Pt(II) complexes”  
**Inorganic Reaction Mechanisms Meeting 2003**  
Athens, GREECE, 08 - 10 January 2004
- ◆ I. Bratsos, E. Zangrando, N. Katsaros, E. Alessio  
“Synthesis and structure of new Ru<sup>II</sup>-dmsO complexes with dicarboxylate ligands”  
**COST D20 Mid-Term evaluation meeting**  
*Metal Compounds in the Treatment of Cancer and Viral diseases*  
Trieste, ITALY, 12 - 14 September 2003
- ◆ I. Bratsos, S. van Zutphen, M. Robillard, N. Katsaros, J. Reedijk  
“Synthesis of a Pt<sup>II</sup> complex, an analogue to carboplatin, tethered on a Gly-Gly dipeptide via solid phase approach “  
**19<sup>th</sup> Panhellenic Conference in Chemistry**  
*The polymorphism of Chemistry and its applications*  
Crete, GREECE, 6 - 10 November, 2002
- ◆ I. Bratsos, B. Mouzopoulou, A. Papakyriakou, N. Katsaros  
“NMR studies of the interaction of Pt(II) complexes with the anticancer drug Bleomycin”  
**6<sup>th</sup> European NMR Large Scale Facilities User Meeting 2002**  
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30. **I. Bratsos**, E. Zangrando, N. Katsaros, E. Alessio, "Synthesis and characterization of novel Ru<sup>II</sup>-dmsO complexes with dicarboxylate ligands", 7<sup>th</sup> European Biological Inorganic Chemistry Conference (EUROBIC 7), Garmisch - Partenkirchen (GERMANY), August 29<sup>th</sup> - July 2<sup>nd</sup>, 2004.
31. **I. Bratsos**, E. Zangrando, N. Katsaros, E. Alessio, "NMR studies of the chemical behaviour in aqueous solution of novel Ru<sup>II</sup>-dmsO complexes with dicarboxylate ligands", COST D20 Conference - Metal Compounds in the Treatment of Cancer and Viral diseases, Garmisch - Partenkirchen (GERMANY), August 27<sup>th</sup> - 28<sup>th</sup>, 2004.
32. **I. Bratsos**, E. Zangrando, N. Katsaros, E. Alessio, "Chemical behavior in aqueous solution of Ru(II)-DMSO complexes with dicarboxylate ligands", 4<sup>th</sup> International Conference of the Chemical Societies of the South-East European Countries (ICOSECS 4) - *Chemical Sciences in Changing Times: Visions, Challenges and Solutions*, Belgrade (SERBIA - MONTENEGRO), July 18<sup>th</sup> - 21<sup>st</sup>, 2004.
33. **E. Efthimiadou, I. Bratsos**, A. Papakyriakou, N. Katsaros, "Interaction of Uranyl Ions with the anticancer drug Bleomycin and native DNA", 4<sup>th</sup> International Conference of the Chemical Societies of the South-East European Countries (ICOSECS 4) - *Chemical Sciences in Changing Times: Visions, Challenges and Solutions*, Belgrade (SERBIA - MONTENEGRO), July 18<sup>th</sup> - 21<sup>st</sup>, 2004.
34. **I. Bratsos**, A. Papakyriakou, N. Katsaros, "Spectroscopic studies on the interaction of the antitumor drug Bleomycin with Pt(II) complexes", Inorganic Reaction Mechanisms Meeting 2003, Athens (GREECE), January 08<sup>th</sup> - 10<sup>th</sup>, 2004.
35. **I. Bratsos**, E. Zangrando, N. Katsaros, E. Alessio, "Synthesis and structure of new Ru<sup>II</sup>-dmsO complexes with dicarboxylate ligands", COST D20 Mid-Term evaluation meeting - *Metal Compounds in the Treatment of Cancer and Viral diseases*, Trieste (ITALY), September 12<sup>th</sup> - 14<sup>th</sup>, 2003.
36. **I. Bratsos**, S. van Zutphen, M. Robillard, N. Katsaros, J. Reedijk, "Synthesis of a Pt<sup>II</sup> complex, an analogue to carboplatin, tethered on a Gly-Gly dipeptide via solid phase approach", 19<sup>o</sup> Panhellenic Conference in Chemistry - *The polymorphism of Chemistry and its applications*, Crete (Greece), Νοεμβρίου 6<sup>th</sup> - 10<sup>th</sup>, 2002.
37. **I. Bratsos**, B. Mouzopoulou, A. Papakyriakou, N. Katsaros, "NMR studies of the interaction of Pt(II) complexes with the anticancer drug Bleomycin", 6<sup>th</sup> European NMR Large Scale Facilities User Meeting 2002, Montecatini Terme (ITALY), October 17<sup>th</sup> - 20<sup>th</sup>, 2002.
38. **I. Bratsos**, S. Lontou, A. Petrou, "Additional parallel pathways accelerate a reaction even if they need higher activation energy", 10<sup>th</sup> Training Seminar in Chemistry, Athens (Greece), December 9<sup>th</sup> - 12<sup>th</sup>, 2000.

## DISSERTATIONS

- Ph.D.:** Ioannis E. Bratsos, "**Synthesis and characterization of Pt(II) and Ru(II) complexes with biologically relevant ligands**", National and Kapodistrian University of Athens, School of Science, Faculty of Chemistry, Athens 2005. [doi: 10.12681/eadd/21234](https://doi.org/10.12681/eadd/21234)
- M.Sc.:** Ioannis E. Bratsos, "**Spectroscopic study of the Interaction of Pt(II) and Pd(II) with the anticancer drug Bleomycin**", National and Kapodistrian University of Athens, School of Science, Faculty of Chemistry, Department of Inorganic Chemistry and Technology, Athens 2003.
- B.Sc.:** Ioannis E. Bratsos, "**Isolation of Metal Ions from Laterite Ores**", National and Kapodistrian University of Athens, School of Science, Faculty of Chemistry, Department of Inorganic Chemistry and Technology, Athens 1999.

## PATENTS

### 1. Italian Patent,

Deposit Number: **MI2005A001817**

Inventors: Enzo ALESSIO, Ennio ZANGRANDO, Barbara SERLI, Ioannis BRATSOS, Gianni SAVA, Alberta BERGAMO.

Title: "**Complessi dicarbossilati di rutenio (II) e loro impiego come antitumorali**"

## INTERNATIONAL RECOGNITION

### Participation in international scientific commissions - Evaluations

- Reviewer for international journals:

Elsevier: **Coordination Chemistry Reviews**  
**Microporous and Mesoporous Materials**  
**Inorganica Chimica Acta**  
**Inorganic Chemistry Communications**

ACS: **Organometallics**  
**Inorganic Chemistry**

RSC: **Chemical Communications**  
**Dalton Trans.**  
**RSC Advances**  
**New Journal of Chemistry**

Wiley: **International Journal of Chemical Kinetics**

Nature P.G.: **Scientific Reports**

Bentham Science: **Mini Reviews in Medicinal Chemistry**

Taylor & Francis: **Journal of Coordination Chemistry**

MDPI: **Chemistry**  
**Molecules**  
**Crystals**  
**Materials**  
**Nanomaterials**  
**Polymers**

Hindawi: **Bioinorganic Chemistry and Applications**

Serbian Chem. Soc.: **Journal of the Serbian Chemical Society.**

([publons](#))

- Referee for international funded research projects:  
**Genesis Oncology Trust** (New Zealand).

### Citation Index

- The published articles have been cited:
  - **One thousand five hundred fourteen (1514)** times up to now (or **1399** excluding self-citations). (Source 28/12/2021: Scopus)
  - **One thousand seven hundred twenty-four (1724)** times. (Source 28/12/2021: Google Scholar)
- Average Citations per Article = **42.06** (ή **38.86**) (Based on Scopus)  
 = **47.89** (Based on Google Scholar)
- h* index = **22** (or **20** excluding self-citations) (Source 28/12/2021: Scopus)  
 = **23** (Source 28/12/2021: Google Scholar)

## AWARDS

- “**Excellence in Teaching**” Award from the educational organization New York College (Athens, Greece) for my services as a tutor after a students vote. (September 2021)
- “**Excellence in Teaching**” Award from the educational organization New York College (Athens, Greece) for my services as a tutor after a students vote. (June 2018)

## FELLOWSHIPS

- ◆ Scholarship by the **University of Trieste** (Italy) to design the project entitled “*Development of new ruthenium-porphyrin conjugates with antitumor activity*” at the Department of Chemical Sciences (Group of Applied Coordination and Organometallic Chemistry) under the supervision of Assoc. Prof. Enzo Alessio. (01/06/2009 – 31/07/2009)
- ◆ Scholarship by the **University of Trieste** (Italy) to accomplish the project entitled “*New drugs for the treatment of lung cancer: Clinical evaluation of the Ruthenium compound NAMI-A as model for the design of new molecules*” at the Department of Chemical Sciences (Group of Applied Coordination and Organometallic Chemistry) under the supervision of Assoc. Prof. Enzo Alessio. (05/09/2007 – 04/11/2007)
- ◆ Scholarship by the **University of Trieste** (Italy) to perform part of the Ph.D Dissertation. The research took place at the Department of Chemical Sciences (Group of Applied Coordination and Organometallic Chemistry) under the supervision of Assoc. Prof. Enzo Alessio. (01/04/2003 - 31/06/2003)
- ◆ Greek-Italian bilateral scholarship by the **Greek Ministry of Education and Religious Affairs** in collaboration with the **Italian Ministry of Foreign Affairs** to perform part of the Ph.D Dissertation. The research took place at the Department of Chemical Sciences, University of Trieste (Italy), under the supervision of Prof. Enzo Alessio. (01/05/2002 – 31/07/2002)
- ◆ Scholarship by the European program “**Marie Curie**” on Medicinal Training Project (Mediciner project: HMPT-CT-2000-00192) to perform part of the Ph.D Dissertation. The research took place at the Gorlaeus Laboratorium, Leiden University, The Netherlands, Department of CBDC, under the supervision of Prof. Dr Jan Reedijk. (01/10/2001 – 01/07/2002)
- ◆ Scholarship by the **National Center of Scientific Research “Demokritos”** (Institute of Physical Chemistry) for graduate studies. (01/11/1999 – 31/10/2003)

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