

Aldo Arrais

Curriculum vitae

PERSONAL DATA

Born in Turin, on 23rd January 1974

Resident in Turin

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BIO AND EDUCATION

Pre-Academic scientific Degree (Italian Liceo Degree, 60/60), obtained in Turin, on 4th July 1992. MS Degree in Chemistry (Italian Laurea Degree, 110/110 e Lode), obtained at the University of Turin, on 2nd December 1998. PhD in Chemical Sciences (XV Italian National Cycle), obtained at the University of Turin, on 29th January 2003. Winner of the National Prize for the Best PhD Thesis in Inorganic Chemistry for the XV Cycle, awarded by the Italian Chemical Society (SCI). Post-Doc Researcher, at the University of Turin and at the University of Eastern Piedmont "Amedeo Avogadro" (2003-2015). Since from 4th January 2016, DiSTA Department Researcher (RTD A) at the University of Eastern Piedmont. Author, co- Author and Corresponding Author of nearly 30 papers published in international Peer-Reviewed Journals and of more than 50 presentations at National and International Meetings.

UNIVERSITY CAREER

2016-	Department Researcher (RTD A), Università del Piemonte Orientale
2006-2015	Post Doc Researcher, Università del Piemonte Orientale
2003-2006	Post Doc Researcher, Università di Torino
2003	Post Doc Researcher, Università del Piemonte Orientale

UNIVERSITY POSITIONS

2016-	Aggregate Professor of General and Inorganic Chemistry, Università del Piemonte Orientale
2005-2015	Adjunct Professor, Università del Piemonte Orientale

MAIN FIELDS OF INTEREST

1. Synthesis and characterization of drugs and pro-drugs provided with antitumour activity
2. Synthesis and characterization of nanomaterials for bio-medical applications
3. Raman and Infrared vibrational spectroscopy
4. Synthesis and characterization of carbon-based nanomaterials

CURRENT ISSUES OF RESEARCH

1. Synthesis of Pt(IV)-based bi-functional pro-drugs to enhance antitumour activity

The synthesis of Pt(IV)-based organometallic complexes, obtained from chemical oxidation of the 'standard' cis-di-chloro-di-amino-Pt(II) chemo-therapeutic agent, provides bi-functional pro-drugs with a second attached bio-medical active moiety, in which increased antitumour activity and cell permeation are observed

2. Synthesis of liposomes and nanoparticles platforms for the enhanced intracellular delivery of drugs and pro-drugs

The synthesis of liposomes, lipidic charged nanovesicles which are dispersed in aqueous solutions, and of inorganic nanoparticles provides an appropriate material platform to increase intracellular delivery of different bio-medical active agents, that are reversibly attached to host substrates

3. Application of Raman and Infrared techniques for the characterization of molecules and materials

Raman and Infrared vibrational techniques are applied in standard and innovative Imaging settings to provide the morphological characterization of bio- substrates and the chemical features of functionalized, metal- and intramolecular complexed, supramolecular assembled molecules

4. Synthesis and chemical functionalization of carbon-based substrates and nanosubstrates

Innovative synthetic methods to provide multi-layer graphenes starting from simple graphitic materials are developed. Chemical functionalization and complexation of fullerenes, carbon nanotubes and nanofibers are developed to provide different surface polarity features.

CURRENT FUNDED PROJECTS

PROGRAMME	FUNDED PROJECT
	IT HAS ALREADY BEEN REPORTED IN THE ITALIAN FILE

TOP FIVE PAPERS

1. They have been already reported in the Italian file

AWARDS

1. Winner of the Italian SCI Prize for the Best PhD in Inorganic Chemistry