



CHEMICAL SCIENCES	
Cycle	XXXIV
Coordinator	Prof. Roberto CORRADINI Department of Chemistry, Life Sciences and Environmental Sustainability email: roberto.corradini@unipt.it
Duration	3 years
Starting date of the PdD programme	01/11/2018
Research Topics	
<p>a) Development of innovative materials and analytical methods for environmental applications;</p> <p>b) Multi-catalytic approaches towards molecular complexity;</p> <p>c) Porous functional materials for the activation of small molecules;</p> <p>d) Development of analytical methodologies for the characterization of environmental, food and biological matrices;</p> <p>e) Development of new catalytic methods to access high value added products starting from biomass sources ;</p> <p>f) Bio-inspired materials and metal complexes for agrochemical and zootechnical applications;</p> <p>g) Interaction of metal ions with biomolecules in neurodegenerative disorders (within the project PRIN2015 "Metal ions, dopamine, and oxidative stress in Parkinson's disease" PRIN2015T778JW, CUP D96J16001220001).</p> <p>Research topic reserved only for a holder of fellowship of Austrian Institute of Technology:</p> <p>h) Biosensing with PNA and aptamers</p>	
Training Objectives	
<p>The aim of the training program is to enable the PhD in Chemistry to acquire the necessary skills to propose and manage research projects in advanced fields of Analytical Chemistry, General and Inorganic Chemistry, Physical Chemistry, Industrial Chemistry and Organic Chemistry . The Doctorate in Chemistry requires that each PhD student work within one of the active research groups at the of Chemistry Units of the of the Department of Chemistry, Life Sciences and Environmental Sustainability (SCVSA), and follow a specific training course in the frame of the chosen sector, through the participation in research activities at qualified centers both in Italy and abroad, at schools and national and international conferences, and by publishing the scientific results achieved in journals with international relevance. Interdisciplinary training activities are also planned to develop the PhD students' ability to expose, discuss and disseminate the subjects covered by their work both in academic and industrial contexts and in general in the entire society.</p>	
Admission requirements	
<p>Applicants who have one of the following degrees may participate in the selection:</p> <ul style="list-style-type: none">- Laurea specialistica or Laurea magistrale (second cycle degree)- Laurea Vecchio Ordinamento (degree obtained under the Italian previous regulations);- an academic Master's degree obtained abroad, comparable to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral programmes. <p>Undergraduate applicants may also submit applications with the obligation of getting their degree by October 31st 2018.</p>	



POSITIONS PUT OUT TO COMPETITION		
With Scholarship		7
Reserved to holders of scholarship funded by foreign States		1
TOTAL		8
Positions with University Scholarship		
N°	<i>Funding entity</i>	<i>Research Topic</i>
3	Scholarship Ministerial funds	<ul style="list-style-type: none"> • see topics at points a) – f) above
1	Scholarship co-funded by Fondazione Cariparma	<ul style="list-style-type: none"> • see topics at points a) – f) above
2	Funded by Department of Chemistry, Life Sciences and Environmental Sustainability	<ul style="list-style-type: none"> • see topics at points a) – f) above
1	Funded by Department of Chemistry, Life Sciences and Environmental Sustainability (co-financing the project PRIN2015T778JW, CUP D96J16001220001	<ul style="list-style-type: none"> • topic g): " Interaction of metal ions with biomolecules in neurodegenerative disorders"
Position reserved to holders of scholarship funded by foreign States		
N°	<i>University or Foreign State</i>	
1	Reserved to holders of fellowship of Austrian Institute of Technology for the topic "Biosensing with PNA and aptamers"	
ADMISSION PROCEDURES		
Assessment of QUALIFICATIONS: up to 40 points (a minimum score of 20 points shall be required to be admitted to the Oral Exam) ORAL EXAM: up to 80 points Minimum score for ELIGIBILITY: 70/120		
ADMISSION PROCEDURES for positions reserved to holders of scholarship funded by foreign States	Assessment of QUALIFICATIONS: up to 120 points Minimum score for ELIGIBILITY: 70/120	
Foreign Language	Language the fluency of which shall be assessed during the Oral Exam: ENGLISH. The evaluation of the knowledge of this language will be oral and will be evaluated at the level of discussion of research topics and / or understanding of scientific texts.	
Possibility of videoconference for candidates residing or temporarily abroad (the relevant request shall be submitted using the form attached to the competitive examination announcement) THE INTERVIEW MAY BE HELD ALSO IN ENGLISH		YES
LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT		
Mandatory documents to be attached to the on-line application		
<ul style="list-style-type: none"> – ANNEX A (art. 5 of the Call for Applications) – Scanned Copy of a valid identification document with photo – Curriculum Vitae et studiorum (art. 4 of the Call for Applications): including the academic career as well as post-graduate experiences, with relative certifications and accompanied by candidates who still have to obtain the Master's degree, by the substitutive declaration of the certification of the exams taken and the relative marks – Abstract of the second cycle master's degree thesis. Undergraduate applicants may submit the draft of the thesis approved by their supervisor (10.000 characters including spaces) 		



- **Certificates and academic transcript of records for both the Bachelor' and the Master' degrees** containing the following details for each degree held: (art. 4 of the Call for Applications):
 - University that granted the degree
 - Type of degree (first cycle/second cycle/single cycle)
 - Name of the degree programme
 - Date of graduation
 - Final mark
 - List of exams and corresponding scores (academic transcript of records)
 - Translation into Italian or English (only for degrees issued in languages other than Italian or English)
- **Statement of Research Interest:** Short text – maximum 2 pages – in Italian or in English, aimed at:
 - 1) explaining the candidate's reasons to enrol in the PhD;
 - 2) research interests, with particular reference to the topics of interest for the specific themes proposed;
 - 3) skills possessed that can contribute to a research project in the field of Chemical Sciences.

Further qualifications that may be attached to the application, if in possession of the applicant
(only qualifications attested by a document drawn up in Italian or in English)

- **Scientific Publications:** Articles on scientific journals with referees, communications presented at conferences or symposia, book chapters etc.

EVALUATION CRITERIA

QUALIFICATION	EVALUTATION CRITERIA	POINTS
Curriculum Vitae et studiorum	Relevance of the academic career as well as postgraduate experiences and other research activities in the chemical field	Up to 15 points
Graduation thesis	Consistency of the Master's Degree thesis with the doctoral programme research topics	Up to 15 points
Statement of Research Interest	Motivation and competence proved in the text presented	Up to 5 points
Scientific Publications	Impact and relevance of the publications presented relevant to the Chemical Sciences	Up to 5 points

LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT

Position reserved to holders of fellowship of Austrian Institute of Technology

Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark. The candidate must attach the certificate confirming the award of the scholarship or equivalent contract by the Austrian Institute of Technology and the eventual judgment expressed at the time of attribution.	Up to 50 points
Graduation thesis	Abstract of the dissertation work (even if not yet discussed and in this case countersigned by the thesis supervisor). Consistency of the Master's Degree thesis with the doctoral programme research topics.	Up to 30 points
Statement of Research Interest	Motivation and competence proved in the text presented	Up to 30 points



Scientific Publications	Impact and relevance of the publications presented relevant to the Chemical Sciences	Up to 10 points
ORAL EXAMINATION	EVALUATION CRITERIA	POINTS
The ORAL EXAM takes place in Italian or in English for foreign candidates. It includes a discussion of the qualifications presented by the candidate and an assessment of his scientific preparation and of his design skills.	<ul style="list-style-type: none">○ knowledge of the subject and preparation of the candidate for the proposed research activities.○ knowledge of English is assessed at the level of discussion of topics of research and understanding of scientific texts.	Up to 80 points
SCHEDULE OF THE ADMISSION EXAMS		
ORAL EXAM	ORAL EXAM DATE: 13 September 2018 TIME: 02:30pm PLACE: ROOM A - Chemistry Building Department of Chemistry, Life Sciences and Environmental Sustainability Parco Area delle Scienze, 17/A – 43124 PARMA - ITALY	
OTHER INFORMATION	For foreign candidates, the admission examinations may be held in English at the candidate's choice.	