

MATERIALS SCIENCE AND TECHNOLOGY	
CYCLE	XXXVII
COORDINATOR	Prof. Enrico DALCANALE email: enrico.dalcanale@unipr.it Department of Chemistry, Life Sciences and Environmental Sustainability
DURATION	3 anni
STARTING DATE OF THE PHD PROGRAM	01/01/2022
PARTNER INSTITUTION	<ul style="list-style-type: none"> The Italian National Research Council (C.N.R.)
PARTNER INSTITUTION FOR UNIVERSITY COOPERATION AGREEMENTS	<ul style="list-style-type: none"> Kazan University (Russia)
TRAINING OBJECTIVES	
<p>The PhD program in Materials Science aims at the preparation of PhDs equipped with strong scientific background and wide research experience in materials science. Enrollment is open to MS laureates in Materials Science, Chemistry, Physics, Industrial Chemistry, Engineering and Biological Sciences. The Board provides a wide range of courses and seminars in different scientific areas, with particular focus on all aspects of materials science (synthesis, characterization, functions and devices). It also offers soft skills courses. The PhD program offers an interdisciplinary preparation through research activity, also in collaboration with foreign Institutions.</p>	
ADMISSION REQUIREMENTS	<p>Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission:</p> <ul style="list-style-type: none"> – Laurea specialistica or Laurea magistrale (second cycle master's degree) – Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations); – Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program <p>Undergraduate applicants may also submit applications with the obligation of getting their degree by October 31st 2021.</p>

POSITION PUT OUT TO COMPETITION	7	With Scholarship - Action IV.4 - "Doctorates and research contracts on innovation topics"	1
		With Scholarship - Action IV.5 - "Doctorates on Green issues of the PON R&I 2014-2020"	6

Position with Scholarship LINKED TO SPECIFIC TOPICS (art. 11 of the Competition notice)

When registering for the competition, candidates must indicate to the Examining Board, in the specific section of ANNEX A, their interest of being assigned one or more scholarships on a specific topic. The Examination Board will evaluate their eligibility based on specific competences, experience and specific aptitudes of the applicants.

N°	ACTION	BOUND RESEARCH TOPIC
1	Action IV.4 - "Doctorates and research contracts on innovation topics"	<ul style="list-style-type: none"> Sustainable transparent ceramics for optical applications
6	Action IV.5 - "Doctorates on Green issues of the PON R&I 2014-2020"	<ul style="list-style-type: none"> Biochar based materials for hydrogen storage Reprocessible structural polymers and membranes Multiphoton microscopy for drug delivery optimization and microplastic recognition Recovery and valorization of ceramic materials from circular economy

	<ul style="list-style-type: none"> • Devices and analytical methods for water saving and environmental decontamination • Nanostructured inorganic materials for sustainable industrial processes and energy recovery
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ADMISSION PROCEDURES	<p>Assessment of QUALIFICATIONS: up to 55 points (a minimum score of 30 points shall be required to be admitted to the Oral Exam)</p> <p>ORAL EXAM: up to 65 points</p> <p>Minimum score for ELIGIBILITY: 70/120</p>
Foreign Language	<p>Language the fluency of which shall be assessed during the Oral Exam: ENGLISH.</p> <p>The evaluation of the knowledge of this language will be oral and will consist in translating of a scientific text.</p>
<p>CANDIDATES ADMITTED TO THE ORAL TEXT CAN TAKE THE EXAM IN PRESENCE OR REMOTELY IN AUDIO AND VIDEO TELECONFERENCE</p> <p>(Candidates who intend to take the Oral Exam remotely must submit request, to this purpose, as per the model attached to the competition notice)</p>	
<p>THE INTERVIEW MAY BE HELD ALSO IN ENGLISH</p>	
<p>LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT</p>	
<p>MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION</p>	
ANNEX A	(art. 5 of the Competition notice)
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)
Curriculum Vitae et studiorum	No specific CV format is required (see art. 4 of the Competition notice)
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)
Qualifications	<p>Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 4 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - 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).</p>
Research Project	<p>Drawn up according to the format attached to the competition announcement</p> <p>THE EVALUATION OF THE PROJECT WILL TAKE PLACE DURING THE ORAL EXAM</p>
<p>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)</p>	
Scientific Publications	Articles and/or reviews in scientific journals with peer reviewing, abstracts of papers or posters presented at conventions or meetings
Final mark of graduation	
Average of the exam marks	(for candidates enrolled under conditions and who graduate by 31.10.2021)

EVALUATION CRITERIA		
QUALIFICATION	EVALUTATION CRITERIA	POINTS
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.	Up to 20 points
Graduation mark	Score related to the final mark: - 110 with honors (magna cum laude): 20 points - 110: 16 points - From 105 to 109: 12 points - From 100 to 104: 8 points - From 95 to 99: 4 points - Under 95: 0 points	Up to 20 points
Average of the exam marks (if the candidate will attain the degree no later than 31 October 2021)	Score related to the average of the exam marks: - 30/30: 20 points - From 28/30 to 29/30: 16 points - From 26/30 to 27/30: 12 points - 25/30: 8 points - 24/30: 4 points - Under 24/30: 0 points	Up to 20 points
Graduation thesis	Consistency of the Master's Degree thesis with the doctoral program research topics (briefly describe the topics in the curriculum vitae)	Up to 10 points
Scientific publications	Articles and/or reviews in scientific journals with peer reviewing, abstracts of papers or posters presented at conventions or meetings	Up to 5 points
ORAL EXAM	EVALUATION CRITERIA	POINTS
The ORAL EXAM will focus on the candidate's motivation to attend the PhD, on the description of his specific research interests and on a discussion of the qualifications presented by the candidate.	<ul style="list-style-type: none"> ○ knowledge of foreign languages: 10 points ○ general knowledge of issue connected to the Master's thesis: 25 points ○ Project evaluation: 30 points 	Up to 65 points
SCHEDULE OF THE ADMISSION EXAMS		
ORAL EXAM	DATE	25 October 2021 (with possible extension in the following day)
	TIME	09:00 AM (Italian time)
	PLACE	Department of Chemistry, Life Sciences and Environmental Sustainability CHEMISTRY BUILDING Parco Area delle Scienze, 17/A – Campus 43124 PARMA - ITALY
OTHER INFORMATION	For foreign candidates, the admission examinations may be held in English at the candidate's choice.	