



PhD in CHIMICA INDUSTRIALE E INGEGNERIA

CHIMICA / INDUSTRIAL CHEMISTRY AND CHEMICAL ENGINEERING - 40th cycle

THEMATIC Research Field: CATALYSIS FOR ENERGY AND ENVIRONMENTAL APPLICATIONS

Monthly net income of PhDscholarship (max 36 months)

€ 1400.0

In case of a change of the welfare rates during the three-year period, the amount could be modified.

Context of the research activity

Motivation and objectives of the research in this field	To study and develop innovative catalysts and catalytic processes for energy-related and environmental applications, aiming at improved efficiency and mitigation of the C ₂ emissions of processes in the fields of mobility, chemical productions, energy conversion systems.
Methods and techniques that will be developed and used to carry out the research	Testing of catalysts under laboratory conditions. Kinetics analysis and study of reaction mechanism. Analysis of the role of heat and mass transfer phenomena. Mathematical modelling of catalytic reactors. Experimental and modelling activities will be performed in the state-of-the art laboratories of the LCCP group at the Department of Energy, Politecnico di Milano.
Educational objectives	To gain a high-level knowledge about catalytic processes for energy applications and environmental protection. The candidate will develop cutting edge competences on the frontiers of the energy transition and of decarbonization strategies.
Job opportunities	Chemical industries, energy companies, consultancy companies in the field of environmental protection, energy efficiency and decarbonization, developers and users of



	energy conversion technologies, catalyst manufacturers, car manufacturers.
Composition of the research group	6 Full Professors 5 Associated Professors 2 Assistant Professors 15 PhD Students
Name of the research directors	Proff. Nova Isabella, Matteo Maestri

Contacts
<p>Research directors:</p> <p>Prof. Isabella Nova, Prof. Enrico Tronconi, Prof. Luca Lietti, Prof. Gianpiero Groppi, Prof. Alessandra Beretta, Prof. Matteo Maestri</p>

Additional support - Financial aid per PhD student per year (gross amount)	
Housing - Foreign Students	--
Housing - Out-of-town residents (more than 80Km out of Milano)	--

Scholarship Increase for a period abroad	
Amount monthly	700.0 €
By number of months	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information
<p>Educational activities (funding for participation in courses, summer schools, workshops and conferences) - financial aid per PhD student per year:</p> <p>1st year: around 1.900 euros per student</p> <p>2nd year: around 1.900 euros per student</p> <p>3rd year: around 1.900 euros per student</p> <p>Teaching assistantship: availability of funding in recognition of supporting teaching activities by the PhD student: There are various forms of financial of for activities of support to the teaching practice. The PhD student is encouraged to take part in these activities within the limits allowed by the regulation.</p>