



PhD in INGEGNERIA DEI MATERIALI / MATERIALS ENGINEERING - 40th cycle

THEMATIC Research Field: MATERIALS ENGINEERING

| Monthly net income of PhDscholarship (max 36 months) |
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| € 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 | 1. Polymeric Materials for Advanced Applications; 2. Surface engineering and advanced coatings; 3. Functional organic materials for applications in photonic and electronic; 4. Production and characterization of micro and nano-structured materials for catalysis, photovoltaic, electronic, biomedical applications; 5. Innovative materials for civil and industrial engineering works; 6. Scattering, Spectroscopy and modeling of materials; 7. Materials and techniques in the Cultural Heritage |
| Methods and techniques that will be developed and used to carry out the research | Advanced methods for materials preparation and characterization, ranging from mechanical tests, physical properties determination, chemical and structural analysis, will be learned and used. Quantum Chemical modelling of molecular materials and polymers |
| Educational objectives | The objective is to combine the theoretical knowledge with technological skills in order to train a qualified researcher who can guide the design, manufacturing and use of traditional and/or new materials. |
| Job opportunities | PhD course offer specialized curricula aimed to the formation of specialized people with skills in: i) development and innovation in the production, processing, application and conservation of traditional materials; ii) development of innovative materials for the production of new manufactured goods or devices to cope with the growing demands of modern technologies. |



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| Composition of the research group | 15 Full Professors 10 Associated Professors 20 Assistant Professors 30 PhD Students |
| Name of the research directors | Chiara Bertarelli |

| Contacts | |
|---|--|
| chiara.bertarelli@polimi.it +39 022399.3224 http://www.dottorato.polimi.it/corsi-di-dottorato/corsi-di-dottorato-attivi/ingegneria-dei-materiali/ | |

| Additional support - Financial aid per PhD student per year (gross amount) | |
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| 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 | |
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| <p><i>Educational activities</i> (purchase of study books and material, funding for participation in courses, summer schools, workshops and conferences) financial aid per PhD student:</p> <p>1st year: 1900 euro 2nd year: 1900 euro 3rd year: 1900 euro</p> <p><i>Teaching assistantship: availability of funding in recognition of supporting teaching activities by the PhD student:</i></p> <p>There are various forms of financial aid 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 regulations.</p> <p><i>Computer and desk availability</i></p> | |