Energy Materials Scientist

Research and development of new materials and technologies for energy production, conversion and storage applications.

<table>
<thead>
<tr>
<th>Reports to:</th>
<th>Materials Team Leader</th>
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<tbody>
<tr>
<td>Department:</td>
<td>Earth Resources and Materials</td>
</tr>
<tr>
<td>Group:</td>
<td>Science</td>
</tr>
<tr>
<td>Tenure:</td>
<td>Permanent</td>
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<tr>
<td>Location:</td>
<td>Gracefield</td>
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<tr>
<td>Direct reports:</td>
<td>None</td>
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<tr>
<td>Budget:</td>
<td>Nil</td>
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<td>Date:</td>
<td>August 2020</td>
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Position priorities and responsibilities

Scientific Research

- Experimental research in material sciences - New materials development using physical and chemical techniques.
- Fields of expertise: Catalytic material synthesis and coatings for enhanced photo catalytic, HER, OER, magnetic and optical properties
- New materials development using physical and chemical techniques.
- Research on energy systems, industrial process
- Fabricate, modify and analyse new materials, surfaces, and interfaces using techniques available within the team.
- Key position objectives: Fabricate, modify and analyse new materials, surfaces, and interfaces using techniques available within the team.
- Develop research plans in consultation with senior staff
- Assist with planning, execution and reporting of established projects
- May be involved in supervising technicians or other staff.

Commercial

- Technology transfer of newly developed scientific research
- Develop prototypes for high-value manufacturing industries
- Liaise with industry in New Zealand to explore and develop new opportunities for Materials Science research
- Establish new collaborations with industry in New Zealand
- Assist with planning, execution and reporting of projects
Communication

- Communicating scientific research through lead authorship and co-authorship of scientific publications papers or reports
- Making presentations at conferences and seminars
- May represent GNS Science at conferences

Projects

- Undertake projects for your manager as and when required

Responsibilities of all staff

- Comply with all GNS Science policies and procedures
- Contribute to making GNS Science a healthy and safe place to work by complying with the responsibilities and accountabilities outlined in the Health and Safety Management System Framework

The responsibilities of this position will change over time to respond to changing needs. The incumbent will require flexibility to adapt and develop as the company and its environment evolves.

Key working relationships

Internal:
- Materials Team, GNS Science Departments, Stakeholder Relations Department

External:
- New Zealand Universities, CRIs, MBIE, RSNZ

Person specification

Skills, knowledge and attributes

- Practical experience in new materials and innovative technology development. The ability and commitment to achieve effective result and work towards or exceed agreed goals

Essential:
- Materials Science, Materials chemistry and Materials Engineering and Chemical Engineering

Desirable:
- Experience in advanced energy materials would be beneficial. Good publication record involving topics relevant to this position

Qualifications

Essential:
- A PhD and/or post-graduate qualification in Physics/Chemistry/Materials Science/ Materials Engineering – 3 years of occupational experience equivalent to a PhD and candidates who submitted their PhD thesis
- Expertise in energy systems, industrial process and new material synthesis and characterisation techniques and/or materials science research
Desirable:
- 1-2 years of experience in material research
- Strong knowledge and experience in industrial process and experimental materials chemistry or advanced materials would be beneficial

Other requirements

Essential:
- Drivers licence

Competencies

The following competencies are expected of all staff:

► **Results Orientation**: The ability and commitment to achieve effective results, and work towards or exceed agreed goals.

► **Business Focus**: The ability and desire to apply appropriate principles and practices to maximise revenue, minimise cost, while meeting our obligations.

► **Relationship Management**: The ability and commitment to develop and maintain effective relationships with groups and individuals.

► **Communication**: The ability to express thoughts and ideas clearly and consistently (orally and in writing).

► **Innovation and Initiative**: The ability and commitment to seek and use better ways of doing things (to improve personal and GNS Science performance).

► **Teamwork**: The ability to establish and maintain effective and cooperative relationships.

► **Professional Integrity**: Act in a manner that conveys high personal and professional standards.

► **Technical Expertise**: The ability to maintain and develop technical expertise.

► **Leadership and Management Skills**: The ability to inspire others to achieve desired results and to develop and enable others to realise their full potential.