

# Template for advertng PhD project on FindAPhD.com

\*\*\*\*Please read accompanying guidance notes\*\*\*\*

<b>Department</b>	School of Engineering and the Built Environment
<b>Supervisors</b>	Senthilarasu Sundaram and Chan Hwang See
<b>Funding Status</b>	Funded PhD Project (Worldwide)
<b>Application Deadline</b>	14/04/2022
<b>Project Title</b>	Effective sensitiser design for the photodynamic therapy application
<b>PROJECT DESCRIPTION</b> <p>Photodynamic therapy (PDT) is a promising technique to treat different kinds of cancers and applicable for some other diseases as well. The photosensitisers combined with the light irradiation is key in the PDT. The effectiveness of the PDT can be easily controlled with the different illumination time and sites of irradiation. In this treatment, normal cells also get affected during the treatment and increase the phototoxicity of the photosensitisers. PDT does not suffer from drug resistance and serious side effects. Photodynamic therapy has limitations in penetration into the deep tissues. To mitigate this issue through designing an effective photosensitiser and shifting them into near infrared wavelength region. This project will focus on designing the sensitizers with infrared shift and characterising them for the photodynamic therapy. The objectives of the project is as follows</p> <ol style="list-style-type: none"><li>1. Molecular dynamic design for an effect photosensitiser</li><li>2. Synthesising the photosensitisers and characterising them</li><li>3. Testing the sensitisers for PDT application</li></ol> <p><b>Academic qualifications</b> A first degree (at least a 2.1) ideally in the Biomedical Engineering/Master in Chemistry with a good fundamental knowledge of materials synthesis, characterisation and background knowledge in materials for medical applications.</p> <p><b>English language requirement</b> IELTS score must be at least 6.5 (with not less than 6.0 in each of the four components). Other, equivalent qualifications will be accepted. <a href="#">Full details of the University's policy</a> are available online.</p> <p><b>Essential attributes:</b></p> <ul style="list-style-type: none"><li>• Experience of fundamental biomedical engineering, materials and chemistry</li><li>• Competent in materials synthesis</li><li>• Knowledge of medicinal materials and applications</li><li>• Good written and oral communication skills</li><li>• Strong motivation, with evidence of independent research skills relevant to the project</li><li>• Good time management</li></ul> <p><b>Desirable attributes:</b> Click here to enter text.</p>	
<b>Indicative Bibliography</b>	Click here to enter text.
<b>Funding notes</b>	This project may be funded by a scholarship of the School of Engineering and Built and Environment. Please see <a href="#">School-funded PhD scholarships - RESEARCH AND INNOVATION (napier.ac.uk)</a> for information on the scholarships and how to apply for them.

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<b>Enquiries</b>	For informal enquiries about this PhD project, please contact <a href="#">Click here to enter text.</a>
<b>Web page</b>	<a href="https://www.napier.ac.uk/research-and-innovation/research-degrees/application-process">https://www.napier.ac.uk/research-and-innovation/research-degrees/application-process</a>

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