**Job Title:** Postdoctoral Research Associate in Semiconductor Optoelectronics  
**Present Grade:** 6

<table>
<thead>
<tr>
<th>Department/College:</th>
<th>Physics</th>
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<td>Directly responsible to:</td>
<td>Dr Qiandong Zhuang</td>
</tr>
<tr>
<td>Supervisory responsibility for:</td>
<td>Co-supervision of PhD students</td>
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**Major Duties:**

To conduct MBE growth and device processing of semiconductor nanowire based quantum materials on silicon and type II quantum materials to produce advanced mid-infrared photodetectors and lasers.

**In particular, the post holder will be expected to:**

1. Take responsibility for day to day project management.
2. To conduct MBE growth of III-V nanowire based quantum structures on silicon
3. To conduct MBE growth of type II quantum materials
4. To fabricate nano-patterned silicon wafers
5. To fabricate photodetectors on silicon
6. To fabricate MIR lasers
7. To characterize the resulting materials and devices
8. Participate the consortium meetings of EC ATTRACT
9. Participate in national and international conferences, presenting the results of the project and learning about current advances in the field.
10. Generally help with the running of the research group, including: supervision of new/junior members of the group and PG students.