**CENTRE FOR HIGH RESOLUTION TRANSMISSION ELECTRON MICROSCOPY (CHRTEM)**

**CHARACTERISATION REQUEST FORM**

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| --- |
| Provide a brief background to your project, describing the nature and application of your research.  |
|  |
| Specify your analysis request by completing the experimental matrix (Table 1) on page 3.  |
| Provide useful literature on similar work if relevant.  |
|  |
| Are there any health or hazard risks for the specimen material? Please specify.  |
|  |
| List anticipated outputs resulting from the requested analysis, indicating the CHRTEM’s authorship status for each item. For clear specifications on authorship and acknowledgement requirements, please see the CHRTEM Terms of Use.  |
|  |
| Is this work IP sensitive?  |
|  |

Name of researcher: Signature: Date:

Name of supervisor: Signature: Date:

*(where applicable)*

**Table 1: Experimental matrix**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Analysis Request | Material to be analysed | Number of specimens (including samplings per specimen) | Specimen history | Sample preparation required | Techniques required (eg. TEM, HRTEM, HRSTEM, STEM, EDS, EELS, SEM, EBSD, WDS etc.)  | Analysis required (eg. Imaging, Spectroscopy, Diffraction, Tomography, Mapping etc.)  | Expected scientific outcome |
| 1 | eg. ZnO nanoparticles | 3 | Calcined 350 °C | Yes – Placing of sample material on TEM support grid | TEM, HRTEM, STEM, EDS | Imaging, diffraction, mapping | Size and distribution; Crystal structure; Elemental distribution |
| 2 | Eg. Irradiated SiC | 1 | Irradiated with neutrons to a dose of 3.4x1021 n/cm2 | Yes – Focussed ion beam preparation (FIB) | TEM, HRTEM | Imaging | Density of crystal defects; Types of crystal defects |
| 3 |  |  |  |  |  |  |  |
| … |  |  |  |  |  |  |  |