**Application Form for Collaborative Research (Fiscal Year 2022)**

Premier Research Institute for Ultrahigh-pressure Sciences (PRIUS),

 Date

**Applicant (Project Leader)**

\*Information of gender and age categories is used ONLY for the report to the Ministry of Education.

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| --- | --- | --- | --- | --- |
| First/Middle/Last name |  | Sex |  | Are you under 36 yrs? [ ] Are you under 40 yrs? [ ]  |
| Affiliation |  |
| Position |  |
| Address |  |
| Tel |  |
| E-mail |  |

**Application type** (Please circle or underline one category) **Your application**

|  |  |  |
| --- | --- | --- |
| A. Use of PRIUS facilities　 B. Collaborative research C. MeetingYA. Young Scientist (use of PRIUS facilities) YB. Young Scientist (collaborative research)  |  | New / Continue |

**Project/Meeting title**

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**Academic field relevant to your application** (Please circle or underline one category)

|  |
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| Earth Sciences / Chemistry / Physics / Mathematics / Materials Science / Engineering / Other ( ) 　　　　　　　 |

**Project members**（\*1, \*2） \*Information of gender and age is used ONLY for the report to the Ministry of Education

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Age | Sex | Affiliation | Position (\*3) | E-mail |
| **GRC faculty member** |  |  | GRC, Ehime University |  |  |
|  | < 36 yrs [ ] < 40 yrs [ ]  |  |  |  |  |
|  | < 36 yrs [ ] < 40 yrs [ ]  |  |  |  |  |
|  | < 36 yrs [ ] < 40 yrs [ ]  |  |  |  |  |
|  | < 36 yrs [ ] < 40 yrs [ ]  |  |  |  |  |

\*1 At least one GRC faculty member should be included as a project member

\*2 If the applicant is a master/PhD student, his/her supervisor should be included as a project member.

\*3 If you include graduate student(s) as project member(s), please specify his/her academic course and grade as of April 2022.

***I agree to follow the rules and regulations in the "Application Guideline".*** Yes[ ]  (←check!)

（Please describe the following information within 2 pages.）

**Project plan: Objective, Method and Expected Results**

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| ＊Please specify the name of the facilities/equipment of GRC necessary for your project and frequency of use, if applicable.＊Please indicate (or submit as a separate sheet about) the specification (shape, dimension, etc.) and the number of nano-polycrystalline diamonds (NPDs) necessary for your experiments, if applicable.\* Expensive consumables such as sintered/single crystal diamond anvils and special WC anvils should be prepared by users.\* If you apply to "Meeting" category, please describe the potential place, schedule and expected number of participants. |
| Name of facilities/equipment | Frequency of use per year(Number of experiments / days used) |  Remarks |
|  |  |  |
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|  |  |  |
| Shape, dimension, and number of NPDs needed for your experiments if applicable\* Please note that we might not be able to meet your request on the number of NPD you need. |  |

**Research achievements relevant to this application**

(e.g. publications, presentations in conferences/meetings, awards/prizes, patents, etc.)

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**Other research fund(s) relevant to this application**

\* This helps us to know the contribution of PRIUS program to your research activity. We will NOT use this information in the selection process.

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**List of facilities/equipment in GRC**

1. **High pressure apparatuses**
2. Multianvil apparatus (ORANGE-1000)
3. Multianvil apparatus (ORANGE-3000)
4. D-DIA Multianvil apparatus (MADONNA I)
5. DIA Multianvil apparatus (MADONNA II) (for experiments using sintered diamond anvils)
6. Diamond anvil cell (DAC)
7. Laser-heating system (Fiber laser) for DAC
8. Laser-heating system (CO2 lasers) for DAC
9. Sound velocity (Ultrasonic) measurement system for multianvil apparatus (TDS5104)
10. **Facilities for micro-analysis**
11. FE-SEM equipped with EDS (JSM-7000F, X-Max)
12. FE-SEM equipped with EBSD (JSM-7000F)
13. SEM-EDS (JSM-6510LV, X-Max)
14. FE-TEM equipped with EDS (JEM-2100F)
15. TEM (JEM-2010)
16. Dual-beam FIB (Scios)
17. FIB (single-beam) (JEM-9310FIB)
18. Micro-focused XRD (RAPIDII-V/DW)
19. Powder XRD (Ultima IV/DD)
20. Micro-Raman system (NRS-5100)
21. Micro-Raman system (RSM 800)
22. Micro-Raman (equipped with a near IR laser) system (NRS-4500)
23. FT-IR Spectrometer (IRT-5200EUO)
24. UV-VIS Spectrometer (V-670)
25. Laser microscope (OPTELICS HYBRID L3)
26. Ion-milling machine (Ion Slicer) (EM-09100IS)
27. Ion-milling machine (PIPS) (Model 691)
28. **Processing machines, etc.**
29. Ultrasonic processing device (UM-150CS)
30. Automatic processing machine ① (MDX-540)
31. Electric furnace ①, ② (Large: ATCM50-100/1700; Small: TS-4B06)
32. Micro-Vickers hardness tester (HMV-G21DT)
33. **Simulation codes**
34. Simulation code for physical properties of mineral
35. Simulation code for computational fluid
36. **Facilities/equipment at external institution**
37. Guide blocks for the deformation experiments (D-DIA and D111) (SPring-8 BL04B1)
38. In-situ X-ray and elastic wave velocity measurement system (SPring-8 BL04B1)