REQUEST FOR PROPOSALS (ver. 230526)

Advanced Materials and Manufacturing Grants – Round 2

<u>Mission of the grant program</u>: Develop and strengthen the materials processing and manufacturing capabilities at Michigan Tech to meet next-generation manufacturing, **externally-funded** research opportunities.

<u>Strategy</u>: Provide **materials and manufacturing grants** to assist university researchers in developing unique and enabling capabilities related to advanced materials and manufacturing.

<u>Description</u>: The Advanced Materials and Manufacturing Tech Forward (AMMTF) initiative, now operating as the Institute of Advanced Materials and Manufacturing (IAMM), **seeks proposals** from university researchers that will advance its mission. Proposals from faculty and/or staff with relevant interests and expertise across all university units are welcomed and encouraged.

All materials- and manufacturing-relevant topics are welcomed. The initiative has particular interest in developing capabilities in the following contemporary and emerging areas:

- Manufacturing for a circular economy, i.e., eco- or sustainable manufacturing
- Data-driven manufacturing and materials synthesis
- Future manufacturing technologies as defined by a recent solicitation by the National Science Foundation (<u>https://www.nsf.gov/attachments/304116/public/future-manufacturing-2022-webinar-slides-508.pdf</u>)
- Cyber manufacturing (manufacturing enhanced by the advanced application of computing, networking, sensing, and/or artificial intelligence)
- Manufacturing process controls derived from massive data streams
- Biomanufacturing (bio-inspired fabrication/manufacturing)
- Any new capabilities or facilities that are available to university researchers

Of less interest would be proposals that are substantially

- Supplies, maintenance, repair, or incremental improvements of existing facilities that do not significantly extend nominal research capabilities
- Undergraduate project support that does not lead to a strong and significant faculty research proposal
- Projects that are primarily data collection that do not extend current knowledge or discovery
- Project budgets that contain summer salary

<u>Proposal Information, preparation, and formatting</u>: **Projects will be funded at a \$10K level for up to a 6mo. period of performance**.

Proposals should be limited to 2 pages in length. Proposals should contain:

- a summary description of the project that and how it ties to the grant program mission and strategy described above
- a discussion and analysis of the return-on-investment opportunities in service to the mission (above); including (for example) identification of specific ROI opportunities and estimated timelines, potential impact for other researchers and projects, and potential for future opportunities. Proposals that demonstrate significant opportunities for external follow-on funding involving several investigators and units will be favorably reviewed.
- a brief description of budget.

Proposals are due COB 6/15/2023; email to iamm@mtu.edu. Deliverables will be negotiated with the AMMTF working group during the final project discussion.

For more information, contact Steve Kampe, MSE: <u>kampe@mtu.edu</u> or other members of the IAMM working group:

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