Memorandum of Understanding
regarding a Venture Fund for the
UW Molecular Engineering Materials Center (UW-MEMC),
an NSF Materials Research Science and Engineering Center (MRSEC)

April 22, 2020

This agreement between the College of Arts and Sciences (CAS) and the College of Engineering (COE) outlines the details of a venture fund and its oversight, as part of the University of Washington Molecular Engineering Materials Center (UW-MEMC). This MOU will take effect May 1, 2020 for a two-year period, until April 30, 2022.

1. The UW Molecular Engineering Materials Center

The UW-MEMC is a research Center, formed to foster the interdisciplinary study of novel materials across the University of Washington campus. It builds on existing expertise and strong programs in Physics, Chemistry, Materials Science and Engineering, Chemical Engineering and Electrical Engineering. With broad support from the Office of Research, CAS and COE, the UW-MEMC promises to form an interdisciplinary hub for research efforts and educational activities in experimental and computational materials science. The National Science Foundation is providing a total of $15.6 M over 6 years, starting fall 2017. This funding is renewable.

2. UW-MEMC Leadership and Participation

The UW-MEMC will be led by Center Director, Daniel Gamelin (Professor, Department of Chemistry, CAS). The educational activities of the Center will be administered by Executive Director of Education and Outreach, Christine Luscombe (Professor, Department of Materials Science and Engineering, COE). There is broad participation across many units, including faculty in Physics, Chemistry, Materials Science and Engineering, Chemical Engineering and Electrical and Computer Engineering.

3. UW-MEMC Venture Fund

A unique aspect of the NSF MRSEC program is that Centers do not sunset but instead are eligible for competitive renewal after completion of their initial 6 years of funding. Moreover, whereas first-term centers are restricted in size, second-term centers are eligible for ~50% expansion in their first renewal bid, which would potentially increase the current $15.6M funding to ~$23M for the following 6-year cycle. Program history indicates that two key criteria must be met for a successful competitive renewal bid: (*i*) the existing center must perform at a very high level in executing its research and education missions, and (*ii*) the proposal must be both technically excellent *and* embody substantial evolution of scientific themes and personnel.

The sole function of the proposed UW-MEMC Venture Fund will be to ensure that the UW is positioned to have the highest probability of successfully securing renewed MRSEC funding in the 2022 competition. To this end, the funds will be spent on strengthening performance in the two categories described above, particularly category (*ii*).

MRSEC base funding does support the establishment of a seed program (MEM-Seed) that has the goals of advancing new research directions, capitalizing on UW-MEMC team expertise for rapid response to high-risk/high-reward opportunities, capitalizing on future synergistic UW faculty hires, and growing the center into emerging areas. However, realistically the NSF only funds about 2 graduate students per year and minor materials/supplies for this purpose. We aim to use the majority of the requested Venture Fund to strengthen these efforts, seeding new projects that will collect the preliminary results and solidify the campus research ties needed to nucleate successful sub-groups that will anchor the upcoming competitive renewal. The requested Venture Fund will support acquisition of preliminary data, exploration of frontier topics, and broadening of UW-MEMC's otherwise limited seed opportunities to ensure the highest probability of success. Particular emphasis will be placed on supporting junior and underrepresented faculty in cases where seed support may be used most effectively to engage new personnel in the UW-MEMC community. Key anticipated expenditures in category (*i*) will include small-scale but critical items such as instrumentation support, student travel/conference support, strategic acquisitions, and supporting center workshops. The Venture Fund will provide much-needed flexibility in each of these categories that is not available from the NSF support itself. The Venture Fund will be administered by Center Director Daniel Gamelin with regular consultation and input from the UW-MEMC faculty leadership and with oversight from the center Advisory Board. Funds spent on the Center's education activities will be administered in conjunction with Executive Director of Education and Outreach Christine Luscombe.

4. Funding

Initial funding for the UW-MEMC Venture Fund will be in the amount of $170 K per year, for two years (March 16, 2018 through March 15, 2020), subject to interim review. The funding is split between the Participating Departments and Colleges.

Participating Departments have agreed to commit some of their RCR revenue in proportion to the amounts received by their unit, to total $150 K per year:

Chemistry	$49 K per year
Physics	$30 K per year
Materials Science and Engineering	$40 K per year
Electrical Engineering	$15 K per year
Chemical Engineering	$16 K per year

Additional funding from the Colleges will provide $100K per year:

College of Arts and Sciences	$62K per year
College of Engineering	$38K per year

Total funding for the Venture Fund will be in the amount $250K for year 1 (April 2020 to March 2021) and $250 K for year 2 (April 2021 – March 2022).

5. Oversight and Review

By January 1, 2021, the Co-Directors will submit an interim report to the signatories on this MOU, describing progress on projects undertaken under the Venture Fund. A satisfactory report will allow funding for year 2. During the Winter quarter of 2022, the signatories on this MOU will carry out a full review of projects initiated under the Venture Fund. Depending on the results of that review, this MOU may be renewed for an additional term, with any continuing funding by the signatories to be decided at that time.

6. Signatures

IN WITNESS WHEREOF, the parties have executed this MOU, by their respective duly authorized officers, on the dates indicated below.

Suzanne Hawley Digitally signed by Suzanne Hawley Date: 2020.04.22 13:03:51 -07'00'

Suzanne L. Hawley
Divisional Dean, Natural Sciences
College of Arts and Sciences

Date

Nancy Allbritton
Dean, College of Engineering

4/22/20
Date

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'Date: 2020.04.23 09:34:56 -07'00
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D. Michael Heinekey
Chair, Chemistry

Date

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Laurence Yaffe
Chair, Physics

Date

Jim Pfaendtner
Chair, Chemical Engineering

Date

4/27/2020

Eric Klavins
Chair, Electrical Engineering

Date

Jihui Yang
Chair, Materials Science & Engineering

Date