Approved by the Board of Trustees

January 18, 2024

**23**

Board Meeting

January 18, 2024

ROLL CALL

PURCHASE RECOMMENDATIONS

Following are purchase recommendations proposed by each university and the System Office. The purchases are to be funded from State appropriations or institutional funds as appropriate. Unless otherwise specified or indicated, purchases are based on the lowest acceptable bid. The vice president, chief financial officer and comptroller has approved all purchases to be funded from State appropriations in accordance with the *Bylaws of the Board of Trustees* and the *General Rules Concerning University Organization and Procedure.*

The Board action recommended in this item complies in all material respects with applicable State and federal laws, University of Illinois *Statutes*, *The General Rules Concerning University Organization and Procedure*, and Board of Trustees policies and directives.

The president of the University of Illinois System concurs.

**PURCHASES RECOMMENDED**

|  |
| --- |
| **University of Illinois Chicago** |

|  |  |  |
| --- | --- | --- |
| 1 | Unit | Department of Physics  |
|  | Item  | EIGER2 X CdTe 4M X-ray Detector |
|   | Cost | $ 1,164,800 (estimated) One-time Purchase |
|  | Vendor | Dectris USA Inc. Philadelphia, PA  |
|  |  | This purchase is exempt from competitive selection procedures in accordance with the Illinois Procurement Code, 30 ILCS 500/1-13 (b) (8), as procurement expenditures necessary to perform sponsored research and other sponsored activities under grants and contracts funded by the sponsor or by sources other than State appropriations.1. In August 2019, a National Science Foundation (NSF) grant #1836674 in the amount $17,201,473 was awarded to the UIC Department of Physics. This grant is valid from August 1, 2019, through July 31, 2025.
2. This procurement provides a detector of synchrotron X-rays upgrade that is required to fulfill the scientific needs described in the NSF grant #1836674. This detector will be integrated into custom designed and built scientific instruments at the ChemMatCARS Sector of the Advanced Photon Source at Argonne National Laboratory. There is a one-year warranty associated with this upgrade.
3. Dectris EIGER2 X CdTe 4M (vacuum compatible version) meets our need for a photon-counting, small pixel (75 µm x 75 µm) high count rate (10^7 photons/s/pixel), large energy range (4 - 80 keV), fast frame rate (1 kHz), zero noise, and large image depth (32 bit) detector. The detector must be able to operate in a vacuum. No other detector on the market has these characteristics.
4. This $17M grant provides new capabilities for UIC to investigate matter at the atomic scale. A discount of $25,000 was negotiated for this detector if ordered by February 1, 2024.

**Business Enterprise Program (BEP)** goals are not established as there are no other sources able to meet the need. |
|  |  |  |
| 2 | Unit | Department of Physics |
|  | Item  | Surface Diffractometer with Double Crystal Deflector (DCD) |
|   | Cost | $ 1,529,930 (estimated) One-time Purchase |
|  | Vendor | Huber Diffraction USA Dana Point, CA   |
|  |  | This purchase is exempt from competitive selection procedures in accordance with the Illinois Procurement Code 30 ILCS 500/1-13 (b) (8) as procurement expenditures necessary to perform sponsored research and other sponsored activities under grants and contracts funded by the sponsor or by sources other than State appropriations.1. In August 2019 a National Science Foundation (NSF) grant #1836674 in the amount $17,201,473 was awarded to the UIC Department of Physics. This grant is valid from August 1, 2019, through July 31, 2025.
2. This Surface Diffractometer with Double Crystal Deflector (DCD) is required to fulfill the research needs funded by NSF grant #1836674 (UIC grant code E0323). The DCD comes with a one-year warranty.
3. This is a custom designed instrument for the study of liquid interfaces with synchrotron X-rays. This instrument will address the scientific needs of the users of NSF ChemMatCARS, a national facility at the Advanced Photon Source, Argonne National Laboratory. These users require a unique hybrid instrument that is capable of grazing incidence, reflection, and transmission surface scattering studies of liquid interfaces.
4. Huber is the only company worldwide that has experience building a similar instrument currently in use at the European Synchrotron Radiation Facility (ESRF). The price of that instrument (roughly 1 million Euros/$1,070,300 American), when adjusted for inflation and the modifications that we are requesting, is comparable to the current price.

**Business Enterprise Program (BEP)** goals are not established as there are no other sources able to meet the need. |
|  |  |  |

|  |
| --- |
| **SUMMARY OF PURCHASES** |
| University of Illinois Chicago | $2,694,730 (estimated) |
| Recommended from Institutional FundsGrand Total | $2,694,730 (estimated) |