Department of Energy to Provide $75 Million for Chemical and Materials Research in Quantum Information Science

Awards Will Shape Future of Quantum Computing and Systems

Today, the U.S. Department of Energy (DOE) announced plans to provide $75 million for fundamental research in chemical and materials sciences aimed at advancing the important emerging field of Quantum Information Science (QIS). A wide-ranging multidisciplinary area of research, QIS is expected to lay the foundation for the next generation of computing and information processing, as well as an array of other innovative technologies in sensing and related applications.

“Quantum computing holds the promise of tackling complex problems in chemistry and materials sciences that lie beyond the reach of classical computing,” said Dr. Chris Fall, Director of DOE’s Office of Science. “At the same time, chemistry and materials science can provide deep insights into quantum phenomena to help accelerate QIS research.”

The current initiative has a dual thrust—one hand, using quantum computers or emulators to solve complex problems in chemistry and materials sciences while on the other hand pursuing chemical and material science research on quantum phenomena, with the goal of aiding in the discovery and design of new quantum information systems.

National laboratories, universities, industry, and nonprofit organizations will be eligible to lead applications for the three-year awards, which will be selected on the basis of peer review. The Office of Basic Energy Sciences (BES) within DOE’s Office of Science, which is funding the effort, envisions awards both for single investigators and larger teams.

Total planned funding is $75 million for projects of three years in duration, subject to congressional appropriations. The Funding Opportunity Announcement can be found on the BES funding opportunities page.