

Mitsubishi Chemical and UCSB: A blueprint for successful university-corporate relationships

The Mitsubishi Chemical Center for Advanced Materials (MC-CAM) at UCSB was established in 2001 as a vehicle for promoting open innovation within the Mitsubishi Chemical Corporation (MCC) and to extend MCC's research enterprise outside of Japan. The research targets for the center were broadly in specialty and functional materials with a specific emphasis on applications targeting organic electronics and solid-state lighting. Mitsubishi Chemical evaluated potential universities world-wide and ultimately chose to establish their center at UC Santa Barbara based on the excellence and breadth of UCSB's materials programs and its track record in interdisciplinary research. MC-CAM is the MCC's first and longest running major university partnership.

The company has dedicated over \$20 million in research support and more than \$2 million in philanthropy since initiating the center. Initial funding from Mitsubishi Chemical endowed two professorships in the College of Engineering, paid in part for a new wing of the Materials Research Laboratory building in which MC-CAM is housed, and covered an initial five years of operations. More recently, MCC has also funded endowed graduate student fellowships for UCSB's Chemical Engineering and Materials Departments.

The MC-CAM at UC Santa Barbara maintains a portfolio of research projects that are selected and shaped by a steering committee of 8 members (four from each partner) from proposals submitted by UC Santa Barbara researchers in collaboration with scientists from Mitsubishi Chemical. Projects are funded for a period of 1–5 years, with a typical budget of \$100,000/PI/project. Most multi-year

projects include multiple PIs and larger budgets. All projects have goals that are in close alignment with the R&D strategy of the company and faculty dialog frequently with research staff from Mitsubishi Chemical to monitor progress and make adjustments if needed.

The University of California owns inventions developed by UCSB employees that derive from the research funded by Mitsubishi Chemical, and the company has first option for exclusive licenses to use the technology. In an effort to accelerate the process of development of successful candidates, Mitsubishi Chemical has embedded researchers within the labs at UC Santa Barbara and formed cross-partnership teams, with researchers at the company and the university collaborating on idea generation and IP.



Under the leadership of Professor Glenn Fredrickson, MC-CAM's director since inception, Mitsubishi Chemical has established one of the longest standing, and by many metrics, most successful collaboration with any university in the country. In its first twelve years of operation, MC-CAM produced over 100 publications and 95 world wide patent applications, with 45 issued patents. The center has also been very efficient in its technology generation: its cost per patent is \$290,000/invention, significantly below the averages of \$500,000 for technology companies and \$1.3 million for research universities.

To learn more about how your company can work with UC Santa Barbara, contact Leslie Edwards (805-893-3944/edwards@engineering.ucsb.edu) or Chris Russo (805-893-5544/crusso@engineering.ucsb.edu) in the Corporate Affiliate Programs office.