Developing hydrogenase-based catalysts for hydrotreatment of petroleum feedstocks

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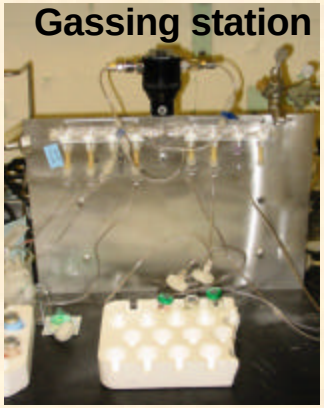
- **Set up an anaerobic microbiology laboratory**
  - **Anaerobic chamber**
  - **Hungate gassing station**

- **Obtained crude extracts of hydrogenase enzyme from *D. gigas* cultures.**

- **Developed a collaboration with Dr. Mike Adams, University of Georgia, Athens, to obtain a hyperthermophillic hydrogenase enzyme from *P. furiosus*.**



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- **Project Focus:**
  - **Purify hydrogenases from mesophillic and thermophillic sources.**
  - **Modify the enzyme with hydrophobic groups to improve binding to organosulfur compounds**
  - **Test binding and conversion in organic solvents and study effect of temperature**
- **Project Partners:**
  - **ChevronTexaco, Argonne National Laboratory (CRADA)**
- **Sponsor:**
  - **DOE National Petroleum Technology Office**