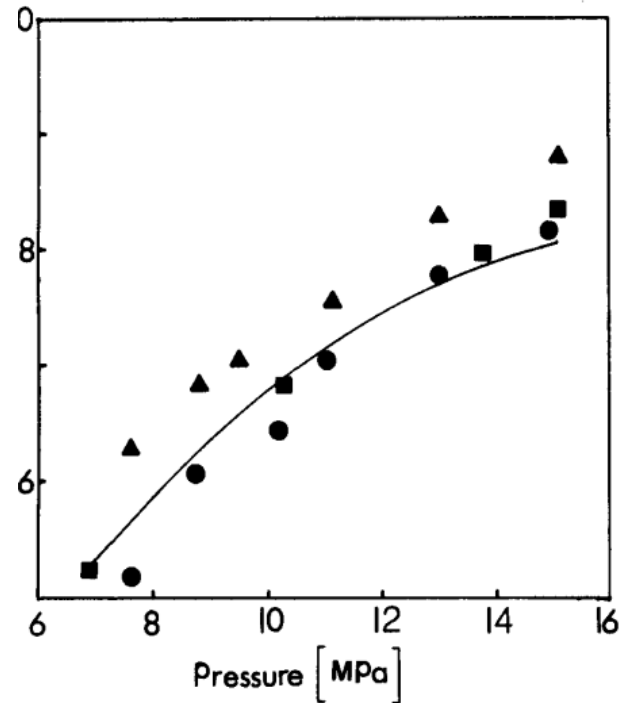


Recent interest in supercritical fluid extraction as a potential separation and purification technique has led to increased interest in high pressure phase equilibria, particularly for systems containing carbon dioxide. In this paper, we describe an apparatus for the measurement of high pressure vapor-liquid equilibria and present data for a test system, carbon dioxide + water, and new data for the carbon dioxide + *n*-hexadecane system. The data have been correlated using the Patel-Teja (1982) and Peng-Robinson (1976) cubic equations of state.

Interesting fact! Jennie Patrick graduated with a B.Sc. in chemical engineering from the University of California at Berkley, she was the only African American female undergraduate and the first African American chemical engineering student at Berkeley in ten years. In 1979 she got her Sc.D. in chemical engineering from Massachusetts Institute of Technology, Dr. Patrick was the first African American woman to earn a doctorate in chemical engineering

If she won a Nobel prize, Dr. Patrick would obtain a lot more opportunities to publish her work, and she would wear the recognition she deserved at the time. She would continue working as she used to, as she always strived for greater achievements without wondering what others thought of her. She would continue her work to motivate others and become the change she wanted to see.

Dr. Jennie Patrick is most well known for her help in developing supercritical fluid extraction technology, which led to her work in high pressure phase equilibria.



Mole fraction of CO₂ in the liquid phase as a function of pressure at 333.15 K. The solid line represents calculated values using the Patel-Teja equation of state with $k_{ij} = 0.055$. The points are the data of this work (●), King et al. (▲) and n-but-amon et al. (■).

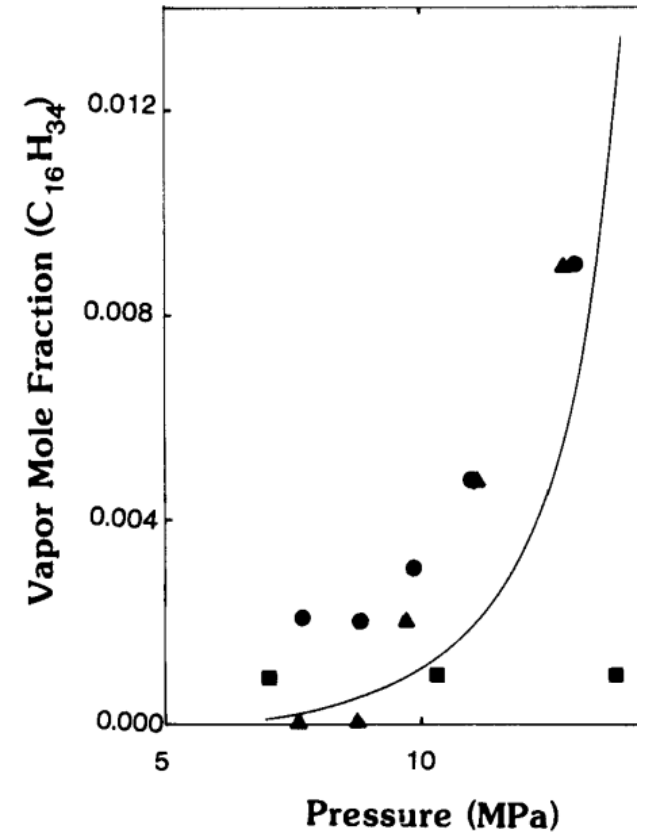


Figure 4 — Mole fraction of C₁₆H₃₄ in the vapor phase as a function of pressure at 333.15 K. The solid line and points have the same meaning as in Figure 3.

Rupert D'souza; Jennie R. Patrick; Amy S. Teja (1988). *High pressure phase equilibria in the carbon dioxide -n-Hexadecane and carbon dioxide - water systems.*, 66(2), 319-323. doi:10.1002/cjce.5450660221

When Jennie Patrick was asked. what advice she would give to an African American female hoping to enter science or engineering as a career?

“I think that’s a very tough question, but I would first tell her to be herself. You need to know who you are. you need to be comfortable with yourself, you need to love yourself, and you need to respect yourself. Then everything else becomes secondary. Achieve the highest goals possible but don’t allow achievement alone to define who you are. Make that decision early. Don’t let material things or world recognition be your driving force.” – Patrick R. Jennie (Proffitt, Notable Women Scientists 1999)