

رتبه دوم ایرانی مقیم خارج

Second Winner - Iranian Researcher Resident Abroad

Project Title:

Development of Molecular-Based
Statistical Mechanical Theories &
Models...

Researcher:

G. Mansoori (Ph.D.)

Country of Residence:

USA

University:

Illinois University



عنوان طرح:

توسعه تئوری ها و مدل‌های مولکولی بر مبنای خواص
مکانیک آماری و...

محقق:

دکتر غلامعلی منصور

کشور مقیم:

آمریکا

دانشگاه:

ایلی نویز

Abstract:

During the 30-year academic and industrial activities many models and theories based on molecular nature of substances are developed in our laboratory. These models are based on statistical mechanical principles. Using these models we are now able to predict phase transitions properties of fluids and fluid mixtures of scientific and industrial interest. We are also able to predict the behavior of fluids and fluid mixtures at sub-and super-critical conditions which are of major scientific and industrial interest.

Our research on organic nanostructures has found applications in the newly developed science of nanotechnology. Our statistical theories of asymmetric mixtures have found tremendous applications in prediction and prevention of fouling/arterial blockage in petroleum production, transportation and refining processes due to heavy organics deposition.