

# JKTech Training Courses

## SURFACE CHEMISTRY OF DISPERSE SYSTEMS



*This course aims to give a better understanding of surface chemistry principles; an important element of mineral processing systems. The course has been developed from the extensive experience and knowledge of Professor Janusz Laskowski.*

### Course Purpose

Understanding of fundamental phenomena is critical in developing new chemical additives and developing more efficient processes, especially when treating finely disseminated ores that require very fine grinding.

Once generated, these fine mineral particles can be subjected to separation by flotation, and finally solid-liquid separation.

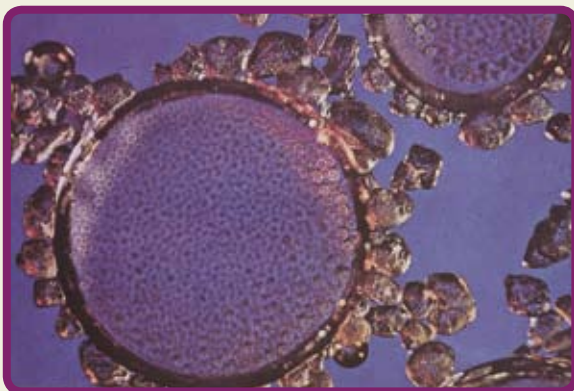
All these unit operations critically depend on the electrical charge of the solid particles, as well as adsorption of various chemical additives that determine the wettability and particle-particle interaction processes.

### Course Objectives

This course is structured to discuss interrelated engineering aspects and to show how better understanding of the fundamentals can be utilised to improve industrial results.

The course objectives include:

- Introduce basic characteristics of disperse systems
- Establish an understanding of the fundamental concepts of surface chemistry



### Course Outline

The topics covered include:

- Introduction to disperse systems
- Basic characteristics of interfaces
- Electrically charged interfaces
- The solid-gas interface
- Adsorption from solutions
- Foams and emulsions
- Stability of lyophobic dispersions
- The relationship between hydrophobicity and floatability

### JKTech Pty Ltd

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*Delivering world class solutions to  
the minerals industry*

# Taking Minerals Industry Education to the Next Level

## Course Attendees

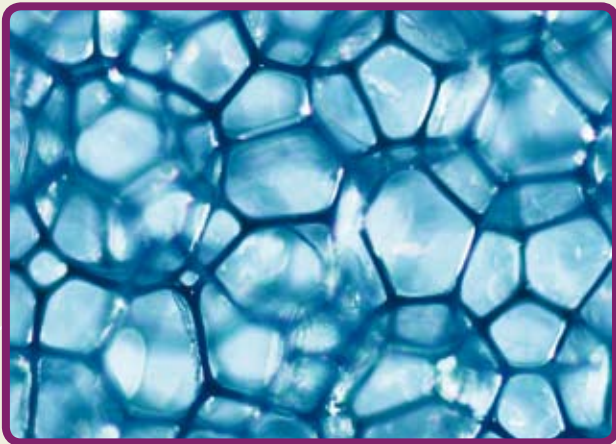
The course is aimed at mining engineering and chemical engineering graduate students who specialise in mineral processing, as well as manufacturers of mining and mineral processing reagents and mineral processing plant personnel.

The material will be presented in an easily understandable manner without the need for mathematical derivations, and without straying too far from topics directly relevant to the fine particle processing related research.

## Course Timing and Location

This course is scheduled for 7th - 8th August, 2007. It will be held at the Julius Kruttschnitt Mineral Research Centre in Brisbane, Australia.

Please visit [www.jktech.com.au](http://www.jktech.com.au) and follow the links to the Training Courses page to download the registration form. Completed registration forms must be returned to JKTech by the 20th July, 2007.



## Course Presenter

*Professor Janusz Laskowski*

Professor Laskowski has been working in the field of surface chemistry and coal processing for many years.

He obtained all his degrees from the Silesian University of Technology in Poland and has spent time at many universities including Lomonosov University in Moscow, the Mining Institute of USSR Academy of Sciences in Moscow, Department of Mineral Technology at the Imperial College in London and more recently at the Department of Mining and Mineral Process Engineering at the University of British Columbia in Vancouver. He chaired the International Mineral Processing Congress in 1979 and has published over 200 papers in refereed journals and conference proceedings as well as several books.

## Cost

The cost per person to attend this course in Brisbane is AUD2,000 (excl GST).

## Other JKTech Services

- Consulting (comminution, flotation, mine-to-mill)
- Quantitative Mineralogy (MLA and JKMineralogy)
- Specialist Software (JKSimMet, JKSimFloat, JKSimBlast)
- Metallurgical Laboratory Services
- Training Courses

## Contact

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*JKTech's range of technologies is supported by the ongoing research activities of the world renowned JKMRC.*

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