

This essential handbook guides investigators in the theory, applications, and practical use of affinity chromatography in a variety of fields including biotechnology, biochemistry, molecular biology, analytical chemistry, proteomics, pharmaceutical science, environmental analysis, and clinical chemistry.

The *Handbook of Affinity Chromatography, Second Edition* reflects upon important factors to consider in the development of affinity methods, such as the choice of support material, immobilization methods, and application or elution conditions. It reviews common affinity methods and explores the latest preparative, analytical, and biophysical applications, including the use of affinity chromatography with other separation techniques and analytical systems. This basis seamlessly supports the discussion of recent developments in techniques including the use of affinity ligands in capillary electrophoresis, mass spectrometry, micro-analytical systems, and optical biosensors. New chapters feature expanded discussions on molecularly imprinted polymers and biomimetic ligands, chromatographic immunoassays, affinity-based immunoassays, affinity-based chiral stationary phases, and affinity ligands in multi-dimensional systems.

Engaging the collaboration of 48 scientists and students from 23 laboratories and organizations to present the latest information on affinity methods, the *Handbook of Affinity Chromatography, Second Edition* illustrates a wide range of applications and theories for scientists, students, and laboratory workers throughout the fields of chemistry and biology.

Features

- Presents the latest research in the theory and practical use of affinity chromatography
- Details common affinity methods such as bioaffinity, immunoaffinity, DNA, boronate, dye-ligand, biomimetic, and metal-ion affinity chromatography
- Discusses techniques used in clinical, environmental, and pharmaceutical analyses
- Illustrates the use of affinity chromatography for applications in biotechnology and molecular biology
- Explains quantitative approaches for the analysis of biological interactions
- Contains nearly 500 figures and tables while providing useful examples of affinity methods and their applications
- Offers over 3000 references to original papers available on topics of interest

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