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A Review of: "Time-Resolved Inverse Gas Chromatography and Its Applications"

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Book Review

Time-Resolved Inverse Gas Chromatography and Its Applications. Nicholas A. Katsanos and George Karaiskakis
June 2004, 180 pp. (hardcover) \$54.00; New York:
HNB Publishing
ISBN: 0-9728061-0-5

Time-resolved chemistry allows the study of chemical kinetics and the identification of important but easily overlooked transient structural intermediates. The practical applications of time-resolved studies cover a broad range of chemistry and biophysics, as well as materials. Inverse gas chromatography can become time resolved and, therefore, record properties that are local with respect to time. Such properties do not involve all adsorption sites, but only those active at a certain time t with respect to a chosen property.

This monograph shows how the method can be used to record such properties as time adsorption energies, local monolayer capacities, local isotherms, energy distribution functions, adsorption rates with lateral molecular interactions, surface diffusion coefficients, effectiveness factors in heterogeneous catalysis, and surface energy-all on heterogeneous surfaces of solids. The time-resolved character of the methods described,

the heterogeneity of the chromatographic surfaces, and the relevant measurements and calculations are explained.

Review: This is a long-awaited book in that historically much work has attempted various applications of chromatographic peak shape and even retention time in chemical dynamics studies. This is not dynamics studied using chromatography in its' normal role as an analytical tool. It is, rather, a concept whereby the dynamics of the chromatographic process itself is used to study chemical and physical processes which alter the normally anticipated observations.

Time-Resolved Inverse Gas Chromatography and its Applications is a very worthwhile book, not only for the specific examples it contains, but the inspiration it will be to those seeking a new way to study even complex chemistry in a new [for them] way.

For more information or to order, visit <http://www.hnbpublish.com/0-5-TOC.html>

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