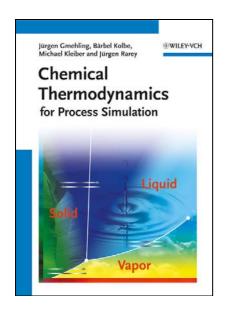
CHEMICAL THERMODYNAMICS

- **J. Gmehling**, Universität Oldenburg, Oldenburg, Germany
- **B.** Kolbe, ThyssenKrupp Uhde GmbH, Dortmund, Germany
- M. Kleiber, ThyssenKrupp Uhde GmbH, Bad Soden, Germany
- J. Rarey, Universität Oldenburg, Oldenburg, Germany

Chemical Thermodynamics

for Process Simulation



2012. XXVI, 736 pages with 301 figures. Hardcover. €99 -

ISBN: 978-3-527-31277-1

This is the only book to apply thermodynamics to realworld process engineering problems, explaining the thermodynamics behind simulations from the view of academic and industrial authors to users of simulation programs. It comprises numerous solved examples, which simplify the understanding of the often complex calculation procedures, and discusses their advantages and disadvantages. The text also includes such special models as for formaldehyde, polymers, and associating compounds. Estimation methods for thermophysical properties and phase equilibria and thermodynamics of alternative separation processes are covered, as are new developments from recent years.

For a deeper understanding additional problems are given at the end of each chapter. To solve the complex problems prepared Mathcad files, Excel files or the DDBSP Explorer version can be accessed via the Internet.

While written for an advanced level, the text is easy to understand for every chemical engineer and chemist with a basic education in thermodynamics and phase equilibria, teaching students the engineering perspective of thermodynamics but also of interest to all companies active in chemistry, pharmacy, oil and gas processing, petrochemistry, refinery, food production, environmental protection and engineering.



FROM THE CONTENTS

Introduction
PvT Behavior of Pure
Compounds
Correlation and Estimation of
Pure Component Properties
Properties of Mixtures
Phase Equilibria in Fluid Phases
Caloric Properties
Electrolyte Solutions

Solid-Liquid Equilibria
Osmosis
Polymer Thermodynamics
Application of Thermodynamics
in Separation Technology
Chemical Reactions
Special Models
Practical Applications

Appendix A: Pure Component **Parameters** Appendix B: Coefficients for High-Precision Equations of State Appendix C: Useful Derivations Appendix D: Standard Potentials for Electrolyte Components Appendix E: Regression Technique for Pure Component Properties Appendix F: Regression Technique for Binary Parameters Appendix G: Ideal Gas Heat Capacity Polynomial Coefficients Appendix H: UNIFAC parameters Appendix I: mod. UNIFAC parameters Appendix J: PSRK parameters Appendix K: VTPR-parameters

ORDER FORM

Yes, please send me the following title:	Delivery and Invoice address:	Thank you for your order.
copies Gmehling, J. et al. Chemical Thermodynamics for Process Simulation	private business	Please pass this order form to your local bookseller
€ 99 ISBN: 978-3-527-31277-1	Surname, First Name	
In EU countries the local VAT is effective. Postage will be charged. Due to fluctuating exchange rates, the prices for John Wiley & Sons' titles are approximate. Prices are	Firm/Institution	
subject to change without notice. Our standard terms and delivery conditions apply. Date of information: 09/19/11	Department	
Terms of Payment	Street/P.O. Box	
☐ Please send an invoice ☐ Cheque is enclosed ☐ Please charge my credit card	Country, Postcode, City	
MasterCard	VAT No.*	or to: Wiley-VCH
Card no.	Tel.	P.O. Box 10 11 61, 69451 Weinheim, Germany Tel. +49 (0) 62 01-60 64 00 Fax +49 (0) 62 01-60 61 84
Expiry date Verification code	Fax	e-mail: service@wiley-vch.de Visit us at http://www.wiley-vch.de/
Date/Signature	e-mail	Register now for the free Wiley-VCH Alerting Service! http://www.wiley-vch.de/home/pas
Please give credit card address if different from delivery address:	Date, Signature	
	Please keep me informed of new publications in the subject areas:	
Street	Chemical Thermodynamics (CH94)	
	Chemical Engineering General (CG00)	
Postcode, City	Thermodynamics (CG00)	

*: If you would like the invoice to be addressed to your company, please include your VAT number so that we can process your order quickly and competently.

