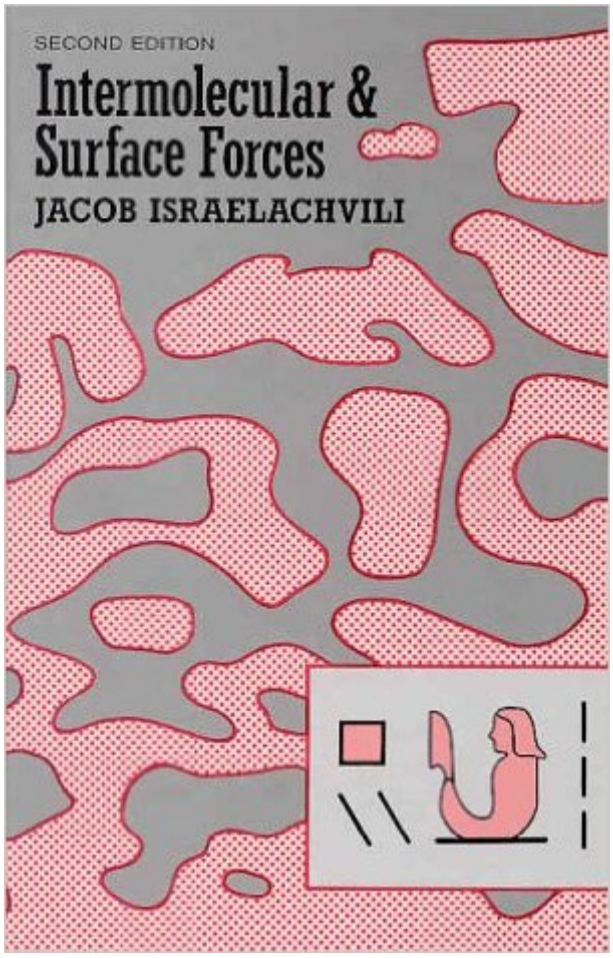
# Intermolecular And Surface Forces



## Synopsis

This book describes the roles of various intermolecular and interparticle forces in determining the properties of simple systems such as gases, liquids, and solids, of more complex colloidal, polymeric, and biological systems. The book provides a thorough grounding in theories and concepts of intermolecular forces, allowing students and researchers to recognize which forces are important in any particular system and how to control these forces. Key Features* Surface-force measurements* Solvation and structural forces* Hydration and hydophobic forces* Ion-correlation forces* Thermal fluctuation (steric and undulation) forces* Particle and surface interactions in polymer melts and polymer solutions* Contains worked examples, discussion topics, and more than 100 problems

## Book Information

Hardcover: 480 pages

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Average Customer Review: 4.7 out of 5 starsÂ Â See all reviewsÂ (18 customer reviews)

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## Customer Reviews

I had the honor of taking a class from the author himself, based upon this text. 10 years later, I still refer to this text in my industrial career. It is comprehensive with regards to the fundamentals... Compared to others that focus more on art and observations, you are presented with the underlying physics, allowing you to deal with entirely novel situations. Compared to classical physics presentations, you recieve things in concise and logical terms without excessive theory or mathematical derivation. Its crowning achievement is its ability to make the physics accessible to graduate and advanced undergraduate chemists or biologists, paving the way for deeper interdisciplinary achievement.

The improvements to the third edition, over the second, are well worth the more than a decade of waiting. Nothing in the content is worse, and some additions are great.However, the product itself--the physical book--is disappointing. Apparently concerned that an e-book savvy public will no longer pay the price required to publish a decent book, the publishers have opted to cut corners in all of the worst ways. To bring the price down into whatever the range is that was indicated by the exhaustive research of their marketing department (which seems to have consisted of a bunch of junior-year unpaid interns sitting around trying to figure out how much THEY might spring for a textbook) the modest geniuses at academic press have opted to print on uncoated (although recycled) stock. This has the twin disadvantages of poor archival quality, and poor printing quality. To compensate for the latter, the text must be printed in larger font, since teeny-weeny letters will smear together on the uncoated stock. The result is a book that is much to large for its content. It is unwieldy, unattractive, and the pages feel both rough to the touch, and soft enough to tear easily. An added disadvantage is that more pages means the places you want to turn to in the book are farther apart, meaning that you have to handle the unattractive and flimsy pages more than you want to. I would not be surprised if there is a surreptitious effort to promote this kind of bad-feeling book to herd the general public toward the Kindle(R).

If you want to learn about the title subject, this is a great intro book. And it’s probably the most enjoyable theory book you are likely to own, if you purchase it.

I used this book extensively while writing up my PhD in Materials Science for calculating interparticle forces in colloidal systems.It’s very well written and thorough in all aspects of the subject matter. And yet even though the subject itself is rather dry, the book is not a difficult read, unlike some other theoretical textbooks that I have.

The 3rd edition of Intermolecular and Surface Forces is an updated and expanded version of an important book concerned with interaction phenomena that take place from the molecular level up to the macroscopic level. The strength of this book is that it elucidates the outcome of different experiments on friction, lubrication, and adhesion phenomena on the basis of phenomenological theories. In addition, the introduction in each chapter of worked examples, problems, and discussion topics confers to this book a very high educational value. If you want to deepen your knowledge about the historical aspects of this field then check Rowlinson’s book Cohesion: A Scientific History of Intermolecular Forces; for deepening your knowledge about the quantum mechanical nature of

intermolecular forces, then see Stone's book The Theory of Intermolecular Forces, now in its 2nd edition.

Great informative read. Not often does a book of this scientific magnitude translate into something that the reader can tolerate for more than 3 pages. For anyone looking to explore into this the world of Intermolecular and Surface Forces, look no further. Quite pleased and refreshing for students in particular.

This text is perfect for the reader who can read graphs and diagrams. A picture is worth a thousand words and so are graphs and diagrams. This text is chock full of graphs with all the information that you may need for an undergraduate or graduate course. I love this book. Its an excellent reference.

This is a excellent print, high quality paper, color figures, and hard cover. No need to say this is a very important and key reference scientific work.

Ground and Surface Water Hydrology To Save the Land and People: A History of Opposition to Surface Coal Mining in Appalachia