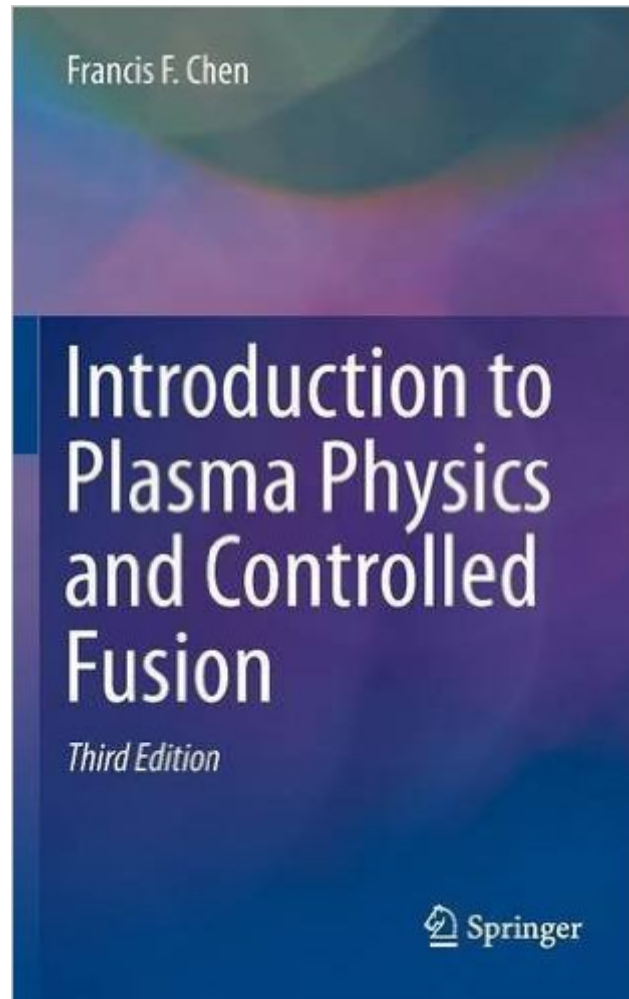# Introduction To Plasma Physics And Controlled Fusion

Synopsis

This complete introduction to plasma physics and controlled fusion by one of the pioneering scientists in this expanding field offers both a simple and intuitive discussion of the basic concepts of this subject and an insight into the challenging problems of current research. In a wholly lucid manner the work covers single-particle motions, fluid equations for plasmas, wave motions, diffusion and resistivity, Landau damping, plasma instabilities and nonlinear problems. For students, this outstanding text offers a painless introduction to this important field; for teachers, a large collection of problems; and for researchers, a concise review of the fundamentals as well as original treatments of a number of topics never before explained so clearly. This revised edition contains new material on kinetic effects, including Bernstein waves and the plasma dispersion function, and on nonlinear wave equations and solitons. For the third edition, updates was made throughout each existing chapter, and two new chapters were added; Ch 9 on â œSpecial Plasmasâ • and Ch 10 on Plasma Applications (including Atmospheric Plasmas).Â

Book Information

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Customer Reviews

Frank Chen is considered to be the father of modern Plasma Physics. I teach a course on supercomputing and hypercomputing aspects of fusion, and as most reading this likely know, Fusion itself has now moved almost entirely into Plasma Research as complementary subjects.Some publishers bring out new editions every year just to rip students off, others wait ten years and provide a wealth of new material. Over many years I've found Springer to be in the

middle, one of the more expensive publishers, but also better than most in providing real new material. So, the question: how does this compare to the previous two editions?First, the original 2000/2001 edition is actually a classic, still fetching $100 US from many sellers, so that begs the question. The Second, however, can be snagged for $26 new, so is it worth it to pay $75 to $100 for the "2016" (actually 2015 edition? Well, the truth is that although a lot has changed in plasma in 10 years, NOT a lot has changed in fusion other than it becoming more and more integrated with fusion research. So first, if you're getting this for plasma study, the new edition is absolutely worth the investment, and both has and organizes a lot of material you won't find even on the professional research web.Fusion is a little more murky. There are other good books on fusion that give more robust bibs, but IMHO Chen is still the go to source for the combination of both, which is where the R&D action is. If you're going into plasma this is a must, fusion, it is a should. If you're very new to both, the second is still a real gem.

Introduction to Plasma Physics and Controlled Fusion Learn and Apply Pocketbook: Top 200 Drugs, Controlled Drugs, Medical Abbreviations in Less than 2 weeks RECIPES:THAI FOOD: VEGE-THAI-RIAN: MOUTHWATERING THAI VEGETARIAN RECIPES (Vegan, Vegetarian Quick Easy Reference): Child Approved Simple Recipes, Fusion ... Special Diet Special Occasions) KNOTS: Your Complete Step By Step Guide To Knot, Knot Uses & Not Tying (Paracord, Craft Business, Knot Tying, Fusion Knots, Knitting, Quilting, Sewing) Paracord for Beginners: Creative, Crafty Paracord Projects & More (Paracord, Craft Business, Knot Tying, Fusion Knots, Knitting, Quilting, Sewing) Rug Hooking: The Beginners Guide To Hooking & Creating Gorgeous Projects! (Paracord, Craft Business, Knot Tying, Fusion Knots, Knitting, Quilting, Sewing, Macrame) Yasou: A Magical Fusion of Greek & Middle Eastern Vegan Cuisine Partially Observed Markov Decision Processes: From Filtering to Controlled Sensing Controlled by the Billionaire: Alpha Billionaire Romance (Forever Yours Book 4) Sleisenger and Fordtran's Gastrointestinal and Liver Disease Review and Assessment (Sleisenger and Fordtrans Gastrointestinal and Liver) Eat Fat and Get Thin, Fit, and Healthier Than Ever Before!: Easy Diet and Delicious Cookbook: Recipes for Dramatic and Sustainable Weight Loss (Includes 21 Day Meal Plan) Best Plants for New Mexico Gardens and Landscapes: Keyed to Cities and Regions in New Mexico and Adjacent Areas, Revised and Expanded Edition Amino Acids: The Way to Health and Wellness: Find Health and Healing from Depression, Addictions, Obesity, Anxiety, Sexual Issues, and Fill Nutritional Needs of Vegetarian and Vegan Diets Die-cutting and Tooling: A guide to the manufacture and use of cutting, embossing and foiling dies, anvils and cylinders The Complete Book of Essential Oils and Aromatherapy: Over

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