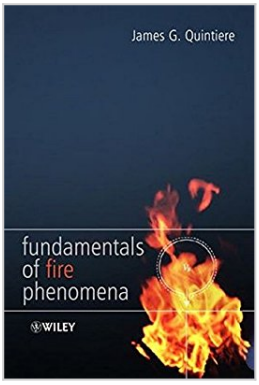


# Fundamentals of Fire Phenomena

*By James G. Quintiere*



**Fundamentals of Fire Phenomena** By James G. Quintiere

Understanding fire dynamics and combustion is essential in fire safety engineering and in fire science curricula. Engineers and students involved in fire protection, safety and investigation need to know and predict how fire behaves to be able to implement adequate safety measures and hazard analyses. Fire phenomena encompass everything about the scientific principles behind fire behavior. Combining the principles of chemistry, physics, heat and mass transfer, and fluid dynamics necessary to understand the fundamentals of fire phenomena, this book integrates the subject into a clear discipline:

- Covers thermochemistry including mixtures and chemical reactions;
- Introduces combustion to the fire protection student;
- Discusses premixed flames and spontaneous ignition;
- Presents conservation laws for control volumes, including the effects of fire;
- Describes the theoretical bases for empirical aspects of the subject of fire;
- Analyses ignition of liquids and the importance of evaporation including heat and mass transfer;
- Features the stages of fire in compartments, and the role of scale modeling in fire.

*Fundamentals of Fire Phenomena* is an invaluable reference tool for practising engineers in any aspect of safety or forensic analysis. Fire safety officers, safety practitioners and safety consultants will also find it an excellent resource. In addition, this is a must-have book for senior engineering students and postgraduates studying fire protection and fire aspects of combustion.

# Fundamentals of Fire Phenomena

*By James G. Quintiere*

**Fundamentals of Fire Phenomena** By James G. Quintiere

Understanding fire dynamics and combustion is essential in fire safety engineering and in fire science curricula. Engineers and students involved in fire protection, safety and investigation need to know and predict how fire behaves to be able to implement adequate safety measures and hazard analyses. Fire phenomena encompass everything about the scientific principles behind fire behavior. Combining the principles of chemistry, physics, heat and mass transfer, and fluid dynamics necessary to understand the fundamentals of fire phenomena, this book integrates the subject into a clear discipline:

- Covers thermochemistry including mixtures and chemical reactions;
- Introduces combustion to the fire protection student;
- Discusses premixed flames and spontaneous ignition;
- Presents conservation laws for control volumes, including the effects of fire;
- Describes the theoretical bases for empirical aspects of the subject of fire;
- Analyses ignition of liquids and the importance of evaporation including heat and mass transfer;
- Features the stages of fire in compartments, and the role of scale modeling in fire.

*Fundamentals of Fire Phenomena* is an invaluable reference tool for practising engineers in any aspect of safety or forensic analysis. Fire safety officers, safety practitioners and safety consultants will also find it an excellent resource. In addition, this is a must-have book for senior engineering students and postgraduates studying fire protection and fire aspects of combustion.

**Fundamentals of Fire Phenomena By James G. Quintiere Bibliography**

- Sales Rank: #541981 in Books
- Published on: 2006-04-21
- Original language: English
- Number of items: 1
- Dimensions: 9.90" h x 1.19" w x 6.95" l, .0 pounds
- Binding: Hardcover
- 460 pages

## Editorial Review

Review
"…an excellent textbook for teaching or learning fire dynamics…comprehensive and useful…" *(Fire Technology, October 2006)*

"…this is an excellent textbook for teaching or learning Fire dynamics!" (*Fire Technology*, January 2007)

From the Back Cover
Understanding fire dynamics and combustion is essential in fire safety engineering and in fire science curricula. Engineers and students involved in fire protection, safety and investigation need to know and predict how fire behaves to be able to implement adequate safety measures and hazard analyses. Fire phenomena encompass everything about the scientific principles behind fire behavior. Combining the principles of chemistry, physics, heat and mass transfer, and fluid dynamics necessary to understand the fundamentals of fire phenomena, this book integrates the subject into a clear discipline:

- Covers thermochemistry including mixtures and chemical reactions;
- Introduces combustion to the fire protection student;
- Discusses premixed flames and spontaneous ignition;
- Presents conservation laws for control volumes, including the effects of fire;
- Describes the theoretical bases for empirical aspects of the subject of fire;
- Analyses ignition of liquids and the importance of evaporation including heat and mass transfer;
- Features the stages of fire in compartments, and the role of scale modeling in fire.

*Fundamentals of Fire Phenomena* is an invaluable reference tool for practising engineers in any aspect of safety or forensic analysis. Fire safety officers, safety practitioners and safety consultants will also find it an excellent resource. In addition, this is a must-have book for senior engineering students and postgraduates studying fire protection and fire aspects of combustion.

About the Author
**James G. Quintiere**, Department of Fire Protection Engineering, University of Maryland, College Park, MD 20742-3031, USA
Educated as a mechanical engineer, Professor Quintiere received a B.S. degree from New Jersey Institute of Technology (1962), and a M.S. (1966) and Ph.D. (1970) from New York University. His career in fire safety began in 1971 when he joined the National Bureau of Standards, now known as the National Institute of Science and Technology. He left in 1989, as Chief of the Fire Science and Engineering Division, to join the faculty of the Department of Fire Protection Engineering. Dr. Quintiere's research in fire has covered a wide range of topics including compartment fire behavior, fire induced flows, fire growth on materials and scale model studies. He is currently Chairman of the International Association for Fire Safety Science (IAFSS). He received the Department of Commerce Bronze Medal (1976) and Silver Medal (1982) as well as the Howard W. Emmons Lecture Award from the IAFSS in 1986. He has written over 75 journal publications and reports.

## Users Review

**From reader reviews:**

**Brian Alexander:**

Why don't make it to be your habit? Right now, try to ready your time to do the important behave, like looking for your favorite reserve and reading a reserve. Beside you can solve your problem; you can add your knowledge by the reserve entitled Fundamentals of Fire Phenomena. Try to face the book Fundamentals of Fire Phenomena as your pal. It means that it can to get your friend when you really feel alone and beside regarding course make you smarter than before. Yeah, it is very fortuned for you personally. The book makes you much more confidence because you can know every little thing by the book. So , we should make new experience as well as knowledge with this book.

**Jeremy Clayton:**

Playing with family in a very park, coming to see the water world or hanging out with good friends is thing that usually you may have done when you have spare time, then why you don't try factor that really opposite from that. A single activity that make you not experience tired but still relaxing, trilling like on roller coaster you are ride on and with addition associated with. Even you love Fundamentals of Fire Phenomena, you may enjoy both. It is very good combination right, you still desire to miss it? What kind of hang type is it? Oh can occur its mind hangout guys. What? Still don't have it, oh come on its called reading friends.

**Francisco Morgan:**

Many people spending their time frame by playing outside together with friends, fun activity having family or just watching TV 24 hours a day. You can have new activity to pay your whole day by examining a book. Ugh, you think reading a book can definitely hard because you have to use the book everywhere? It ok you can have the e-book, getting everywhere you want in your Cell phone. Like Fundamentals of Fire Phenomena which is obtaining the e-book version. So , try out this book? Let's see.

**Sarah Petty:**

That guide can make you to feel relax. This specific book Fundamentals of Fire Phenomena was multi-colored and of course has pictures on the website. As we know that book Fundamentals of Fire Phenomena has many kinds or type. Start from kids until youngsters. For example Naruto or Detective Conan you can read and believe you are the character on there. Therefore not at all of book are usually make you bored, any it can make you feel happy, fun and relax. Try to choose the best book to suit your needs and try to like reading that will.

**James G. Quintiere #Y5FUS0RZAC7**

# Read Fundamentals of Fire Phenomena By James G. Quintiere for online ebook

Fundamentals of Fire Phenomena By James G. Quintiere Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Fundamentals of Fire Phenomena By James G. Quintiere books to read online.

## Online Fundamentals of Fire Phenomena By James G. Quintiere ebook PDF download

### Fundamentals of Fire Phenomena By James G. Quintiere Doc

**Fundamentals of Fire Phenomena By James G. Quintiere Mobipocket**

**Fundamentals of Fire Phenomena By James G. Quintiere EPub**

**Y5FUS0RZAC7: Fundamentals of Fire Phenomena By James G. Quintiere**