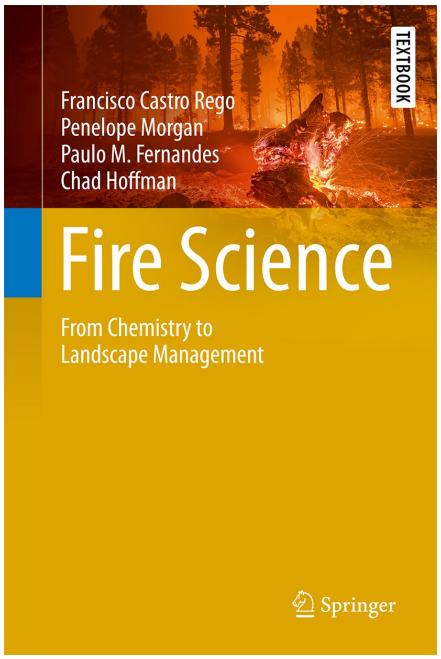

1st ed. 2021, XXXVIII, 644 p. 326 illus., 243 illus. in color.

Printed book

Hardcover

84,99 € | £74.99 | $109.99

[1]90,94 € (D) | 93,49 € (A) | CHF 100,50

eBook

69,99 € | £59.99 | $84.99

[2]69,99 € (D) | 69,99 € (A) | CHF 80,00

Available from your library or springer.com/shop

MyCopy [3]

Printed eBook for just

€ | $ 24.99

springer.com/mycopy

Error[en_EN | Export.Bookseller.MediumType | SE]

F.C. Rego, P. Morgan, P. Fernandes, C. Hoffman

Fire Science

From Chemistry to Landscape Management

Series: Springer Textbooks in Earth Sciences, Geography and Environment

- Presents a straight-forward learning path from fire behavior to fire effects with implications for integrated fire management
- Clearly illustrates fire science with many practical applications to the fire challenges facing society in a rapidly changing world
- Case studies and interactive spreadsheets illustrate key ideas to enhance learning

This textbook provides students and academics with a conceptual understanding of fire behavior and fire effects on people and ecosystems to support effective integrated fire management. Through case studies, interactive spreadsheets programmed with equations and graphics, and clear explanations, the book provides undergraduate, graduate, and professional readers with a straightforward learning path. The authors draw from years of experience in successfully teaching fundamental concepts and applications, synthesizing cutting-edge science, and applying lessons learned from fire practitioners. We discuss fire as part of environmental and human health. Our process-based, comprehensive, and quantitative approach encompasses combustion and heat transfer, and fire effects on people, plants, soils, and animals in forest, grassland, and woodland ecosystems from around the Earth. Case studies and examples link fundamental concepts to local, landscape, and global fire implications, including social-ecological systems. Globally, fire science and integrated fire management have made major strides in the last few decades. Society faces numerous fire-related challenges, including the increasing occurrence of large fires that threaten people and property, smoke that poses a health hazard, and lengthening fire seasons worldwide. Fires are useful to suppress fires, conserve wildlife and habitat, enhance livestock grazing, manage fuels, and in ecological restoration. Understanding fire science is critical to forecasting the implication of global change for fires and their effects. Increasing the positive effects of fire (fuels reduction, enhanced habitat for many plants and animals, ecosystem services increased) while reducing the negative impacts of fires (loss of human lives, smoke and carbon emissions that threaten health, etc.