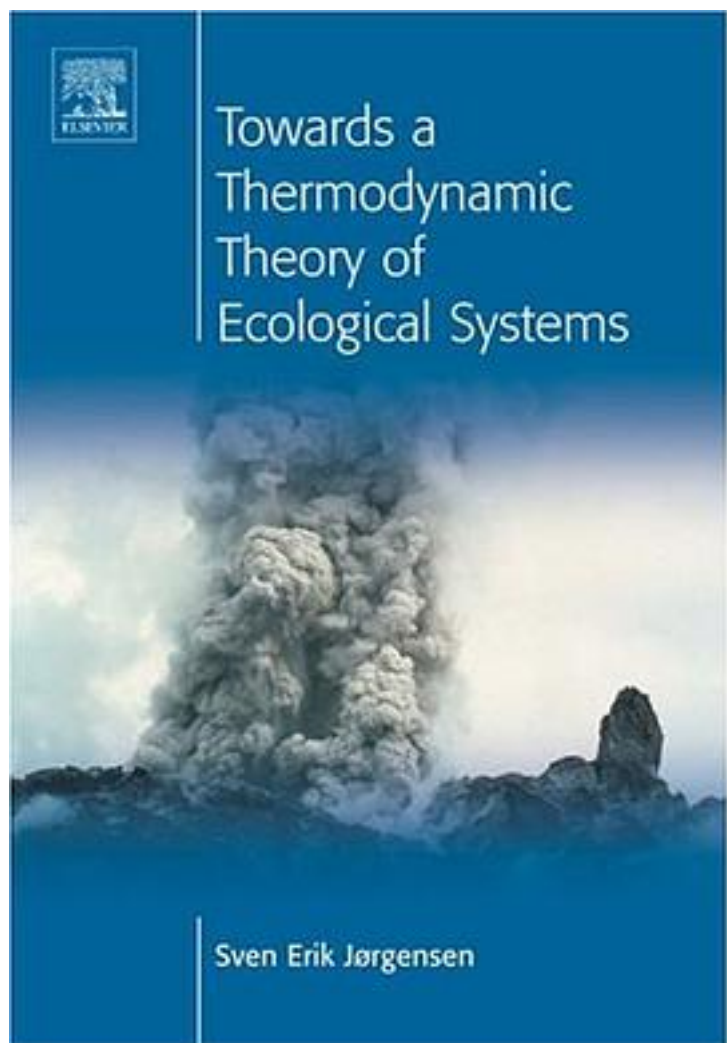


Towards a Thermodynamic Theory for Ecological Systems



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The book presents a consistent and complete ecosystem theory based on thermodynamic concepts. The first chapters are devoted to an interpretation of the first and second law of thermodynamics in ecosystem context. Then Prigogine's use of far from equilibrium thermodynamic is used on ecosystems to explain their reactions to perturbations. The introduction of the concept exergy makes it possible to give a more profound and comprehensive explanation of the ecosystem's reactions and growth-patterns. A tentative fourth law of thermodynamic is formulated and applied to facilitate these explanations. The trophic chain, the global energy and radiation balance and pattern and the reactions of ecological networks are all explained by the use of exergy. Finally, it is discussed how the presented theory can be applied more widely to explain ecological observations and rules, to assess ecosystem health and to develop ecological models.

作者介绍:

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标签

自然科学

评论

对理解系统的不确定性蛮有启发的。看得算是还比较囫圇，以后会常翻的。

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书评

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