





Special Issue Reprint

# **Computational Methods of Multi-Physics Problems**

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This book offers a collection of six papers addressing problems associated with the computational modeling of multi-field problems. Some of the proposed contributions present novel computational techniques, while other topics focus on applying state-of-the-art techniques in order to solve coupled problems in various areas including the prediction of material failure during the lithiation process, which is of major importance in batteries; efficient models for flexoelectricity, which require higher-order continuity; the prediction of composite pipes under thermomechanical conditions; material failure in rock; and computational materials design. The latter exploits nano-scale modeling in order to predict various material properties for two-dimensional materials with applications in, for example, semiconductors. In summary, this book provides a good overview of the computational modeling of different multi-field problems.





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