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Sommario/riassunto

In their classic text, Transport Phenomena, Bird, Stewart. and Lightfoot state their opinion that the subject of transport phenomena should rank along with thermodynamics, mechanics, and electromagnetism as one of the "key engineering sciences." This thought was not shared by many traditional metallurgists, and diffusion in the solid state was the only aspect of transport phenomena included in many traditional university metallurgy curricula. However, as metallurgists transformed themselves into materials scientists and engineers, and the artificial barriers between the various engineering disciplines were lowered, the materials engineers began to see the truth in the opinion of Bird, Stewart, and Lightfoot. The major difference, however, between the first and this edition is that this edition contains an additional chapter, Chapter 12, titled "Boiling and Condensation." The material presented in this chapter is particularly important in view of the current interest in Renewal Energy Resources involving such devices as windmills and solar panels. Developments in this field require a thorough familiarity with the phenomena and mechanisms of boiling and condensation.