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Nota di contenuto	Historical notes on planet formation / Peter Bodenheimer -- The formation and evolution of planetary systems : placing our solar system in context / Jeroen Bouwman [and others] -- Destruction of protoplanetary disks by photoevaporation / Sabine Richling, David Hollenbach and Harold W. Yorke -- Turbulence in protoplanetary accretion disks : driving mechanisms and role in planet formation / Hubert Klahr [and others] -- The origin of solids in the early solar system / Mario Trieloff and Herbert Palme -- Experiments on planetesimal formation / Gerhard Wurm and Jurgen Blum -- Dust coagulation in protoplanetary disks / Thomas Henning [and others] -- The accretion of giant planet cores / Edward W. Thommes and Martin J. Duncan -- Planetary transits : a first direct vision of extrasolar planets / Alain Lecavelier des Etangs and Alfred Vidal-Madjar -- The core accretion-gas capture model for gas-giant planet formation / Olenka Hubickyj -- Properties of exoplanets : a Doppler study of 1330 stars /

Geoffrey Marcy [and others] -- Giant planet formation : theories meet observations / Alan Boss -- From hot Jupiters to hot Neptunes ... and below / Christophe Lovis, Michel Mayor and Stephane Udry -- Disk-planet interaction and migration / Frederic Masset and Wilhelm Kley -- The brown dwarf-planet relation / Matthew R. Bate -- Exoplanet detection techniques : from astronomy to astrobiology / Wolfgang Brandner -- Overview and prospective in theory and observation of planet formation / Douglas N.C. Lin.

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Sommario/riassunto

When this book was published in 2006, it had been just over ten years since the first planet outside our solar system was detected. Since then, much work has focused on understanding how extrasolar planets may form, and discovering the frequency of potentially habitable Earth-like planets. This volume addresses fundamental questions concerning the formation of planetary systems in general, and of our solar system in particular. Drawing from advances in observational, experimental and theoretical research, it summarises our understanding of the planet formation processes, and addresses major open questions and research issues. Chapters are written by leading experts in the field of planet formation and extrasolar planet studies. The book is based on a meeting held at Ringberg Castle in Bavaria, where experts gathered together to present and exchange their ideas and findings. It is a comprehensive resource for graduate students and researchers, and is written to be accessible to newcomers to the field.

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