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Nota di contenuto	pt. 1. Algebraic proofs of the theorem of Campbell, Baker, Hausdorff and Dynkin -- pt. 2. Proofs of the algebraic prerequisites.
Sommario/riassunto	Motivated by the importance of the Campbell, Baker, Hausdorff, Dynkin Theorem in many different branches of Mathematics and Physics (Lie group-Lie algebra theory, linear PDEs, Quantum and Statistical Mechanics, Numerical Analysis, Theoretical Physics, Control Theory, sub-Riemannian Geometry), this monograph is intended to: 1) fully enable readers (graduates or specialists, mathematicians, physicists or applied scientists, acquainted with Algebra or not) to understand and apply the statements and numerous corollaries of the main result; 2) provide a wide spectrum of proofs from the modern literature, comparing different techniques and furnishing a unifying point of view and notation; 3) provide a thorough historical background of the results, together with unknown facts about the effective early contributions by Schur, Poincaré, Pascal, Campbell, Baker, Hausdorff and Dynkin; 4) give an outlook on the applications, especially in Differential Geometry (Lie group theory) and Analysis (PDEs of

subelliptic type); 5) quickly enable the reader, through a description of the state-of-art and open problems, to understand the modern literature concerning a theorem which, though having its roots in the beginning of the 20th century, has not ceased to provide new problems and applications. The book assumes some undergraduate-level knowledge of algebra and analysis, but apart from that is self-contained. Part II of the monograph is devoted to the proofs of the algebraic background. The monograph may therefore provide a tool for beginners in Algebra.