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Titolo	Geometric Structure of Chemistry-Relevant Graphs [[electronic resource]] : Zigzags and Central Circuits // by Michel-Marie Deza, Mathieu Dutour Sikiri, Mikhail Ivanovitch Shtogrin
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ISBN	81-322-2449-3
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Descrizione fisica	1 online resource (220 p.)
Collana	Forum for Interdisciplinary Mathematics, , 2364-6748 ; ; 1
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Soggetti	Graph theory Mathematical physics Chemometrics Graph Theory Mathematical Applications in the Physical Sciences Math. Applications in Chemistry
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1. Introduction: main ZC-notions -- Chapter 2. Zigzags of fullerenes and c-disk-fullerenes -- Chapter 3. Zigzags and railroads of spheres 3_v and 4_v -- Chapter 4. ZC-circuits of 4-regular and self-dual $\{2,3,4\}$ -spheres -- Chapter 5. ZC-circuits of 5- and 6-regular spheres -- Chapter 6. Goldberg–Coxeter construction and parametrization -- Chapter 7. ZC-circuits of Goldberg–Coxeter construction -- Chapter 8. Zigzags of polytopes and complexes.
Sommario/riassunto	The central theme of the present book is zigzags and central-circuits of three- or four-regular plane graphs, which allow a double covering or covering of the edgeset to be obtained. The book presents zigzag and central circuit structures of geometric fullerenes and several other classes of graph of interest in the fields of chemistry and mathematics. It also discusses the symmetries, parameterization and the Goldberg–Coxeter construction for those graphs. It is the first book on this subject, presenting full structure theory of such graphs. While many previous publications only addressed particular questions about selected graphs, this book is based on numerous computations and

presents extensive data (tables and figures), as well as algorithmic and computational information. It will be of interest to researchers and students of discrete geometry, mathematical chemistry and combinatorics, as well as to lay mathematicians.
