

1. Record Nr.	UNINA9910624303203321
Titolo	Single molecule mechanics on a surface : gears, motors and nanocars / / edited by Francesca Moresco and Christian Joachim
Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2023] ©2023
ISBN	3-031-16930-1
Descrizione fisica	1 online resource (197 pages)
Collana	Advances in Atom and Single Molecule Machines
Disciplina	547.7
Soggetti	Molecular machinery
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Intro -- Preface -- Contents -- Unidirectional Motion of Single Molecules at Surfaces -- 1 Unidirectionality Caused by Local Gradients -- 1.1 Rotation -- 1.2 Translation -- 2 Intrinsic Unidirectionality -- 2.1 Rotation -- 2.2 Translation -- References -- DMBI-from n-Type Dopant to Molecular Machines -- 1 Introduction -- 2 1,3-Dimethyl-2-Phenyl-2,3-Dihydro-1H-Benzoimidazole (DMBI) as Building Block for Molecular Machinery -- 3 Varying the Molecular Structure of DMBI -- 4 Summary -- References -- Assembly, Diffusion and Rotation of Organic Molecules on a Gold Surface -- 1 Introduction -- 2 Theoretical Method -- 3 Adsorption of 4-acetylbiphenyl on Au(111) -- 3.1 Diffusion of a Single Molecule on Au(111) -- 3.2 Formation of Supramolecular Assemblies -- 4 Adsorption of DMBI-P on Au(111): Formation of a Unidirectional Molecular-Rotor -- 5 Conclusions -- References -- From Early Prototypes to On-Surface Drivable Single Molecule Nano-vehicles -- 1 Introduction -- 2 STM and Controlled Manipulations of Single Objects -- 3 Evidence of a Lateral Translation Motion on a Surface -- 3.1 First Nano-vehicle on a Surface -- 3.2 Translational Motion of a Nano-vehicle -- 4 Controlled Altitudinal Rotations and Wheel Dimers -- 4.1 Indirect Evidence of an Altitudinal Rotation -- 4.2 Direct Evidence of an Altitudinal Rotation -- 5 Nanocar Race I: Manipulation of Nano-vehicles -- 5.1 The French Nano-vehicle Engaged in the Race -- 5.2 The Five Other Nano-vehicles Engaged in the 1st Race -- 6 A Motorized Nano-vehicle -- 7

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