1. Record Nr. UNINA9910785993003321

Autore	Kowalik Janusz S
Titolo	Using OpenCL [[electronic resource]] : programming massively parallel computers / / Janusz Kowalik and Tadeusz Puzniakowski
Pubbl/distr/stampa	Amsterdam, : IOS Press, c2012
ISBN	1-299-33347-8 1-61499-030-1
Descrizione fisica	1 online resource (312 p.)
Collana	Advances in parallel computing ; ; v. 21
Altri autori (Persone)	PuzniakowskiTadeusz
Disciplina	005.2752
Soggetti	OpenCL (Computer program language) Parallel computers Parallel programming (Computer science)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Title Page; Preface; Contents; Introduction; Existing Standard Parallel Programming Systems; MPI; OpenMP; Two Parallelization Strategies: Data Parallelism and Task Parallelism; Data Parallelism; Task Parallelism; Example; History and Goals of OpenCL; Origins of Using GPU in General Purpose Computing; Short History of OpenCL; Heterogeneous Computer Memories and Data Transfer; Heterogeneous Computer Memories; Data Transfer; The Fourth Generation CUDA; Host Code; Phase a. Initialization and Creating Context; Phase b. Kernel Creation, Compilation and Preparations for Kernel Execution Phase c. Creating Command Queues and Kernel ExecutionFinalization and Releasing Resource; Applications of Heterogeneous Computing; Accelerating Scientific/Engineering Applications; Conjugate Gradient Method; Jacobi Method; Power Method; Monte Carlo Methods; Conclusions; Benchmarking CGM; Introduction; Additional CGM Description; Heterogeneous Machine; Algorithm Implementation and Timing Results; Conclusions; OpenCL Fundamentals; OpenCL Overview; What is OpenCL; CPU + Accelerators; Massive Parallelism Idea; Work Items and Workgroups; OpenCL Execution Model; OpenCL Memory Structure OpenCL C Language for Programming KernelsQueues, Events and Context; Host Program and Kernel; Data Parallelism in OpenCL; Task

Parallelism in OpenCL; How to Start Using OpenCL; Header Files; Libraries; Compilation; Platforms and Devices; OpenCL Platform Properties; Devices Provided by Platform; OpenCL Platforms - C++; OpenCL Context to Manage Devices; Different Types of Devices; CPU Device Type; GPU Device Type; Accelerator; Different Device Types - Summary; Context Initialization - by Device Type; Context Initialization - Selecting Particular Device; Getting Information about Context OpenCL Context to Manage Devices - C++Error Handling; Checking Error Codes; Using Exceptions - Available in C++; Using Custom Error Messages; Command Queues; In-order Command Queue; Out-of-order Command Queue; Command Queue Control; Profiling Basics; Profiling Using Events - C example; Profiling Using Events - C++ example; Work-Items and Work-Groups; Information About Index Space from a Kernel; NDRange Kernel Execution; Task Execution; Using Work Offset; OpenCL Memory; Different Memory Regions - the Kernel Perspective; Relaxed Memory Consistency
Global and Constant Memory Allocation - Host CodeMemory Transfers - the Host Code; Programming and Calling Kernel; Loading and Compilation of an OpenCL Program; Kernel Invocation and Arguments; Kernel Declaration; Supported Scalar Data Types; Vector Data Types and Common Functions; Synchronization Functions; Counting Parallel Sum; Parallel Sum - Kernel; Parallel Sum - Host Program; Structure of the OpenCL Host Program; Initialization; Preparation of OpenCL Programs; Using Binary OpenCL Programs; Computation; Release of Resources; Structure of OpenCL host Programs in C++; Initialization Preparation of OpenCL Programs

2. Record Nr. UNINA9910797133103321

Autore	Geiser Ken
Titolo	Chemicals without harm : policies for a sustainable world / / Ken Geiser
Pubbl/distr/stampa	Cambridge, Massachusetts ; ; London, England : , : The MIT Press, , [2015] ©2015
ISBN	0-262-32702-3 0-262-32701-5
Descrizione fisica	1 online resource (457 p.)
Collana	Urban and industrial environments
Disciplina	660
Soggetti	Green chemistry Chemicals - Safety measures Chemical industry - Waste minimization
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Contents; Preface; 1 The Problem with Chemicals; I Chemical Control Policies; 2 Regulating Hazardous Chemicals; 3 Reassessing Chemical Control Policies; II Reframing Chemical Policies; 4 Considering New Initiatives; 5 Reframing the Chemicals Problem; 6 Understanding the Chemical Economy; III A Chemical Conversion Strategy; 7 Driving the Chemical Market; 8 Transforming the Chemical Industry; 9 Designing Greener Chemistry; IV Safer Chemical Policies; 10 Characterizing and Prioritizing Chemicals; 11 Generating Chemical Information; 12 Substituting Safer Chemicals 13 Developing Safer Alternatives14 Drafting Safer Chemical Policies; V Chemicals without Harm; 15 Reconstructing Government Capacity; 16 Solving the Chemicals Problem; Notes; Bibliography; Index
Sommario/riassunto	Today, there are thousands of synthetic chemicals used to make our clothing, cosmetics, household products, electronic devices, even our children's toys. Many of these chemicals help us live longer and more comfortable lives, but some of these highly useful chemicals are also persistent, toxic, and dangerous to our health and the environment. For fifty years, the conventional approach to hazardous chemicals has focused on regulation, barriers, and protection. In Chemicals without

Harm, Ken Geiser proposes a different strategy, based on developing and adopting safer alternatives to hazardous chemicals rather than focusing exclusively on controlling them.