

# Molecular Beam Epitaxy

Thank you totally much for downloading **Molecular Beam Epitaxy** .Maybe you have knowledge that, people have look numerous times for their favorite books in the same way as this Molecular Beam Epitaxy , but stop going on in harmful downloads.

Rather than enjoying a good ebook taking into consideration a mug of coffee in the afternoon, then again they juggled in the same way as some harmful virus inside their computer. **Molecular Beam Epitaxy** is nearby in our digital library an online permission to it is set as public so you can download it instantly. Our digital library saves in multiple countries, allowing you to acquire the most less latency epoch to download any of our books following this one. Merely said, the Molecular Beam Epitaxy is universally compatible subsequently any devices to read.

**Silicon-Molecular Beam Epitaxy** - E. Kasper 2018-05-04

This subject is divided into two volumes. Volume I is on homoepitaxy with the necessary systems, techniques, and models for growth and dopant incorporation. Three chapters on homoepitaxy are followed by two chapters describing the different ways in which MBE may be applied to create insulator/Si stackings which may be used for three-dimensional circuits. The two remaining chapters in Volume I are devoted to device applications. The first three chapters of Volume II treat all aspects of heteroepitaxy with the exception of the epitaxial insulator/Si structures already treated in volume I.

**Epitaxy** - Marian A. Herman 2013-03-09

In a uniform and comprehensive manner the authors describe all the important aspects of the epitaxial growth processes of solid films on crystalline substrates, e.g. processes in which atoms of the growing film mimic the arrangement of the atoms of the substrate. Emphasis is put on sufficiently fundamental and unequivocal presentation of the subject in the form of an easy-to-read review. A large part of this book focuses on the problems of heteroepitaxy. The most important epitaxial growth techniques which are currently widely used in basic research as well as in manufacturing processes of devices are presented and discussed in detail.

*Silicon Molecular Beam Epitaxy* - 1985

*Silicon Molecular Beam Epitaxy* - E. Kasper 2012-12-02

This two-volume work covers recent developments in the single crystal growth, by molecular beam epitaxy, of materials compatible with silicon, their physical characterization, and device application. Papers are included on surface physics and related vacuum synthesis techniques such as solid phase epitaxy and ion beam epitaxy. A selection of contents: Volume I. SiGe Superlattices. SiGe strained layer superlattices (G. Abstreiter). Optical properties of strained GeSi superlattices grown on (001)Ge (T.P. Pearsall et al.). Growth and characterization of SiGe atomic layer superlattices (J.-M. Baribeau et al.). Optical properties of perfect and imperfect SiGe superlattices (K.B. Wong et al.). Confined phonons in stained short-period (001) Si/Ge superlattices (W. Bacsá et al.). Calculation of energies and Raman intensities of confined phonons in SiGe strained layer superlattices (J. White et al.). Rippled surface topography observed on silicon molecular beam epitaxial and vapour phase epitaxial layers (A.J. Pidduck et al.). The 698 meV optical band in MBE silicon (N. de Mello et al.). Silicon Growth Doping. Dopant incorporation kinetics and abrupt profiles during silicon molecular beam epitaxy (J.-E. Sundgren et al.).

Influence of substrate orientation on surface segregation process in silicon-MBE (K. Nakagawa et al.). Growth and transport properties of SiSb1 (H. Jorke, H. Kibbel). Author Index. Volume. II. In-situ electron microscope studies of lattice mismatch relaxation in GexSi1-x/Si heterostructures (R. Hull et al.). Heterogeneous nucleation sources in molecular beam epitaxy-grown GexSi1-x/Si strained layer superlattices (D.D. Perovic et al.). Silicon Growth. Hydrogen-terminated silicon substrates for low-temperature molecular beam epitaxy (P.J. Grunthaler et al.). Interaction of structure with kinetics in Si(001) homoepitaxy (S. Clarke et al.). Surface step structure of a lens-shaped Si(001) vicinal substrate (K. Sakamoto et al.). Photoluminescence characterization of molecular beam epitaxial silicon (E.C. Lightowers et al.). Doping. Boron doping using compound source (T. Tatsumi). P-type delta doping in silicon MBE (N.L. Matthey et al.). Modulation-doped superlattices with delta layers in silicon (H.P. Zeindell et al.). Steep doping profiles obtained by low-energy implantation of arsenic in silicon MBE layers (N. Djebbar et al.). Alternative Growth Methods. Limited reaction processing: growth of Si/Si1-xGex for heterojunction bipolar transistor applications (J.L. Hoyt et al.). High gain SiGe heterojunction bipolar transistors grown by rapid thermal chemical vapor deposition (M.L. Green et al.). Epitaxial growth of single-crystalline Si1-xGex on Si(100) by ion beam sputter deposition (F. Meyer et al.). Phosphorus gas doping in gas source silicon-MBE (H. Hirayama, T. Tatsumi). Devices. Narrow band gap base heterojunction bipolar transistors using SiGe alloys (S.S. Iyer et al.). Silicon-based millimeter-wave integrated circuits (J-F. Luy). Performance and processing line integration of a silicon molecular beam epitaxy system (A.A. van Gorkum et al.). Silicides. Reflection high energy electron diffraction study of Cosi2/Si multilayer structures (Q. Ye et al.). Epitaxy of metal silicides (H. von

Kanel et al.). Epitaxial growth of ErSi2 on (111)si (D. Loretto et al.). Other Material Systems. Oxygen-doped and nitrogen-doped silicon films prepared by molecular beam epitaxy (M. Tabe et al.). Properties of diamond structure SnGe films grown by molecular beam epitaxy (A. Harwit et al.). Si-MBE: Prospects and Challenges. Prospects and challenges for molecular beam epitaxy in silicon very-large-scale integration (W. Eccleston). Prospects and challenges for SiGe strained-layer epitaxy (T.P. Pearsall). Author Index.

**Molecular Beam Epitaxy and Characterization of GaAsN and Its Application to Quantum Dot Cascade Light Sources** - Carl H. Fischer 2004

Papers from the 16th North American Conference on Molecular Beam Epitaxy - North American Conference on Molecular Beam Epitaxy (16, 1997, Ann Arbor, Mich.) 1998

*Silicon Molecular Beam Epitaxy* - Erich Kasper 1990

This two-volume work covers recent developments in the single crystal growth, by molecular beam epitaxy, of materials compatible with silicon, their physical characterization, and device application. Papers are included on surface physics and related vacuum synthesis techniques such as solid phase epitaxy and ion beam epitaxy. A selection of contents: Volume I. SiGe Superlattices. SiGe strained layer superlattices (G. Abstreiter). Optical properties of strained GeSi superlattices grown on (001)Ge (T.P. Pearsall et al.). Growth and characterization of SiGe atomic layer superlattices (J.-M. Baribeau et al.). Optical properties of perfect and imperfect SiGe superlattices (K.B. Wong et al.). Confined phonons in strained short-period (001) Si/Ge superlattices (W. Bacsá et al.). Calculation of energies and Raman intensities of confined phonons in SiGe strained layer superlattices (J. White et al.). Rippled surface topography observed on silicon molecular beam epitaxial and vapour phase epitaxial layers (A.J. Pidduck et al.). The 698 meV optical band in

MBE silicon (N. de Mello et al.).  
Silicon Growth Doping.  
*Molecular Beam Epitaxy 1996 - 1997*

**Molecular Beam Epitaxy** - John Wilfred Orton 2015

This volume describes the development of molecular beam epitaxy from its origins in the 1960s through to the present day. It begins with a short historical account of other methods of crystal growth, both bulk and epitaxial, to set the subject in context, emphasising the wide range of semiconductor materials employed. This is followed by an introduction to molecular beams and their use in the Stern-Gerlach experiment and the development of the microwave MASER-- [Source inconneue].

**Molecular Beam Epitaxy** - Robin F.C. Farrow 1995-12-31

In this volume, the editor and contributors describe the use of molecular beam epitaxy (MBE) for a range of key materials systems that are of interest for both technological and fundamental reasons. Prior books on MBE have provided an introduction to the basic concepts and techniques of MBE and emphasize growth and characterization of GaAs-based structures. The aim in this book is somewhat different; it is to demonstrate the versatility of the technique by showing how it can be utilized to prepare and explore a range of distinct and diverse materials. For each of these materials systems MBE has played a key role both in their development and application to devices.

**Molecular Beam Epitaxy** - John Orton 2015-06-25

The book is a history of Molecular Beam Epitaxy (MBE) as applied to the growth of semiconductor thin films (note that it does not cover the subject of metal thin films). It begins by examining the origins of MBE, first of all looking at the nature of molecular beams and considering their application to fundamental physics, to the development of nuclear magnetic resonance and to the invention of the microwave MASER. It shows how molecular beams of silane (SiH<sub>4</sub>) were used to study the nucleation of

silicon films on a silicon substrate and how such studies were extended to compound semiconductors such as GaAs. From such surface studies in ultra-high vacuum the technique developed into a method of growing high quality single crystal films of a wide range of semiconductors. Comparing this with earlier evaporation methods of deposition and with other epitaxial deposition methods such as liquid phase and vapour phase epitaxy (LPE and VPE). The text describes the development of MBE machines from the early "home-made" variety to that of commercial equipment and show how MBE was gradually refined to produce high quality films with atomic dimensions. This was much aided by the use of various in-situ surface analysis techniques, such as reflection high energy electron diffraction (RHEED) and mass spectrometry, a feature unique to MBE. It looks at various modified versions of the basic MBE process, then proceed to describe their application to the growth of so-called "low-dimensional structures" (LDS) based on ultra-thin heterostructure films with thickness of order a few molecular monolayers. Further chapters cover the growth of a wide range of different compounds and describe their application to fundamental physics and to the fabrication of electronic and optoelectronic devices. The authors study the historical development of all these aspects and emphasise both the (often unexpected) manner of their discovery and development and the unique features which MBE brings to the growth of extremely complex structures with monolayer accuracy.

**Papers from the 23rd North American Conference on Molecular Beam Epitaxy** - Gerry Sullivan 2006

*Gas Source Molecular Beam Epitaxy* - Morton B. Panish 2013-03-07

The first book to present a unified treatment of hybrid source MBE and metalorganic MBE. Since metalorganic MBE permits selective area growth, the latest information on its application to the INP/GaInAs(P) system is presented. This system has been highlighted because it is one of rising importance, vital to optical

communications systems, and has great potential for future ultra-high-speed electronics. The use of such analytical methods as high resolution x-ray diffraction, secondary ion mass spectroscopy, several photoluminescence methods, and the use of active devices for materials evaluation is shown in detail.

Silicon Molecular Beam Epitaxy - 1985

*Molecular Beam Epitaxy of III-V Compounds* - K. Ploog 1984-03-01

*Molecular Beam Epitaxy Growth and Characterization of ZnO-based Layers and Heterostructures* - Abdelhamid Abdelrehim Mahmoud Elshaer 2008

Papers from the 19th North American Conference on Molecular Beam Epitaxy - North American Conference on Molecular Beam Epitaxy 2001

**Molecular Beam Epitaxy** - Marian A. Herman 2013-03-08

This first-ever monograph on molecular beam epitaxy (MBE) gives a comprehensive presentation of recent developments in MBE, as applied to crystallization of thin films and device structures of different semiconductor materials. MBE is a high-vacuum technology characterized by relatively low growth temperature, ability to cease or initiate growth abruptly, smoothing of grown surfaces and interfaces on an atomic scale, and the unique facility for in situ analysis of the structural parameters of the growing film. The excellent exploitation parameters of such MBE-produced devices as quantum-well lasers, high electron mobility transistors, and superlattice avalanche photodiodes have caused this technology to be intensively developed. The main text of the book is divided into three parts. The first presents and discusses the more important problems concerning MBE equipment. The second discusses the physico-chemical aspects of the crystallization processes of different materials (mainly semiconductors) and device structures. The third part describes the characterization methods which link the physical properties of the

grown film or structures with the technological parameters of the crystallization procedure. Latest achievements in the field are emphasized, such as solid source MBE, including silicon MBE, gas source MBE, especially metalorganic MBE, phase-locked epitaxy and atomic-layer epitaxy, photoassisted molecular layer epitaxy and migration enhanced epitaxy.

**Molecular Beam Epitaxy of III-V Compounds** - K. Ploog 2012-12-06  
Epitaxial growth and electronic properties of semiconductor thin films are becoming increasingly important for fundamental and applied research and for device applications. This book contains a comprehensive collection of over 1500 references covering the first 25 years of molecular beam epitaxy of III-V compound semiconductors. Molecular beam epitaxy is a versatile thin film growth technique which emerged from the 'Three-temperature method' developed in the 1950s and from surface kinetic studies performed in the 1960s. III-V semiconductors such as GaAs, AlAs, (GaIn)As, InP, etc., play an important role in the application to optoelectronic and high-speed devices. Over the past three years the technology of molecular beam epitaxy has spread rapidly to most major research and development laboratories through out the world, and an increasing number of highly refined III-V semiconductor structures with exactly tailored electronic properties have been produced and explored for fundamental studies as well as for device application. The comprehensive bibliography on this dramatically expanding topic helps chemists, engineers, materials scientists, and physicists working in semiconductor research and development areas to sort out the important literature of their particular interest. A direct reproduction of the output of a computer printer has been used to enable rapid publication and to keep printing costs low. The work was sponsored by the 'Bundesministerium für Forschung und Technologie' of the Federal Republic of Germany. Stuttgart, January 1984 K. Ploog . K.

Graf Subject Categories and  
References Introduction ... Year 1977

...

*Silicon-molecular beam epitaxy* - 1988

Silicon Molecular Beam Epitaxy - E.  
Kasper 2018-05-04

This subject is divided into two volumes. Volume I is on homoepitaxy with the necessary systems, techniques, and models for growth and dopant incorporation. Three chapters on homoepitaxy are followed by two chapters describing the different ways in which MBE may be applied to create insulator/Si stackings which may be used for three-dimensional circuits. The two remaining chapters in Volume I are devoted to device applications. The first three chapters of Volume II treat all aspects of heteroepitaxy with the exception of the epitaxial insulator/Si structures already treated in volume I.

**Papers from the 23rd North American Conference on Molecular Beam Epitaxy**

- North American Conference on  
Molecular Beam Epitaxy 2006

Molecular Beam Epitaxy of Graphene on Gold Foils: Growth and Characterization - Anand Sampat  
2013-01-21

Master's Thesis from the year 2012 in the subject Materials Science, University of California, Berkeley, language: English, abstract: The application of graphene for large-area electronics requires controllable growth of single crystalline quasi-freestanding graphene films. Controllable growth of graphene films on gold foils at various temperatures using molecular beam epitaxy is shown. Film quality and electrical characteristics probed using Hall measurement, Raman spectroscopy, and Rutherford backscattering spectrometry are shown to improve at lower temperature possibly peaking at ~825° C. Further experiments are required to assess a stronger correlation between growth parameters and film characteristics. In particular, varying carbon flux and increasing the number of growths are discussed.

**Proceedings of the ... Molecular-Beam**

**Epitaxy Workshop** - Molecular Beam  
Epitaxy Workshop 1990

*Chemical Beam Epitaxy and Related Techniques* - John S. Foord 1997-12-08

Chemical Beam Epitaxy (CBE), is a powerful growth technique which has come to prominence over the last ten years. Together with the longer established molecular beam epitaxy (MBE) and metal organic vapour phase epitaxy (MOVPE), CBE provides a capability for the epitaxial growth of semiconductor and other advanced materials with control at the atomic limit. This, the first book dedicated to CBE, and closely related techniques comprises chapters by leading research workers in the field and provides a detailed overview of the state-of-the-art in this area of semiconductor technology. Topics covered include equipment design and safety considerations, design of chemical precursors, surface chemistry and growth mechanisms, materials and devices from arsenide, phosphide, antimonide, silicon and II-VI compounds, doping, selected area epitaxy and etching. The volume provides an introduction for those new to the field and a detailed summary for experienced researchers.

**Molecular Beam Epitaxy** - Brian R.  
Pamplin 2013-10-22

Molecular Beam Epitaxy introduces the reader to the use of molecular beam epitaxy (MBE) in the generation of III-V and IV-VI compounds and alloys and describes the semiconductor and integrated optics reasons for using the technique. Topics covered include semiconductor superlattices by MBE; design considerations for MBE systems; periodic doping structure in gallium arsenide (GaAs); nonstoichiometry and carrier concentration control in MBE of compound semiconductors; and MBE techniques for IV-VI optoelectronic devices. The use of MBE to fabricate integrated optical devices and to study semiconductor surface and crystal physics is also considered. This book is comprised of eight chapters and opens with an overview of MBE as a crystal growth technique. The discussion then turns to the deposition of semiconductor

superlattices of GaAs by MBE; important factors that must be considered in the design of a MBE system such as flux uniformity, crucible volume, heat shielding, source baffling, and shutters; and control of stoichiometry deviation in MBE growth of compound semiconductors, along with the effects of such deviation on the electronic properties of the grown films. The following chapters focus on the use of MBE techniques for growth of IV-VI optoelectronic devices; for fabrication of integrated optical devices; and for the study of semiconductor surface and crystal physics. The final chapter examines a superlattice consisting of a periodic sequence of ultrathin p- and n-doped semiconductor layers, possibly with intrinsic layers in between. This monograph will be of interest to chemists, physicists, and crystallographers.

*Molecular Beam Epitaxy* - R. F. C. Farrow 1995

In this volume, the editor and contributors describe the use of molecular beam epitaxy (MBE) for a range of key materials systems that are of interest for both technological and fundamental reasons. Prior books on MBE have provided an introduction to the basic concepts and techniques of MBE and emphasize growth and characterization of GaAs-based structures. The aim in this book is somewhat different; it is to demonstrate the versatility of the technique by showing how it can be utilized to prepare and explore a range of distinct and diverse materials. For each of these materials systems MBE has played a key role both in their development and application to devices.

*Growth of Crystals* - E.I. Givargizov 2012-12-06

This 18th volume of the series includes invited papers from the Seventh All-Union Conference on the Growth of Crystals and the Symposium on Molecular-Beam Epitaxy that were held in Moscow in November, 1988. In choosing papers, the Program Committee of the conference gave priority to studies in rapidly

emerging areas of the growth and preparation of crystals and crystalline films. The qualifications of the authors were also considered. This ensured that the material was of a high standard and that the problems discussed covered a wide range. These are the same criteria that, we hope, are typical of the volumes of this series. The articles of the present volume are divided into four sections: I. Processes on the growth surface. II. Molecular-beam epitaxy. III. Growth of crystals and films from solutions and fluxes. N. Growth of crystals from the melt. Following tradition, the series opens with three theoretical articles. These examine problems applicable to various crystallization media: instability of the crystallization front (for a more general case than before and for a comparatively complicated system, a solution), adsorption and migration of atoms and molecules (the analysis is made on a quantum-chemical level), and the kinetics of step and dislocation growth in the presence of surface anisotropy as well as impurity adsorption (several earlier known methods are summarized). The next two articles are experimental and methodical.

*Growth Processes and Surface Phase Equilibria in Molecular Beam Epitaxy* - Nikolai N. Ledentsov 1999-07-02

The book considers the main growth-related phenomena occurring during epitaxial growth, such as thermal etching, doping, segregation of the main elements and impurities, coexistence of several phases at the crystal surface and segregation-enhanced diffusion. It is complete with tables, graphs and figures, which allow fast determination of suitable growth parameters for practical applications.

**Molecular Beam Epitaxy** - Hajime Asahi 2019-02-01

Covers both the fundamentals and the state-of-the-art technology used for MBE Written by expert researchers working on the frontlines of the field, this book covers fundamentals of Molecular Beam Epitaxy (MBE) technology and science, as well as state-of-the-art MBE technology for

electronic and optoelectronic device applications. MBE applications to magnetic semiconductor materials are also included for future magnetic and spintronic device applications. Molecular Beam Epitaxy: Materials and Applications for Electronics and Optoelectronics is presented in five parts: Fundamentals of MBE; MBE technology for electronic devices application; MBE for optoelectronic devices; Magnetic semiconductors and spintronics devices; and Challenge of MBE to new materials and new researches. The book offers chapters covering the history of MBE; principles of MBE and fundamental mechanism of MBE growth; migration enhanced epitaxy and its application; quantum dot formation and selective area growth by MBE; MBE of III-nitride semiconductors for electronic devices; MBE for Tunnel-FETs; applications of III-V semiconductor quantum dots in optoelectronic devices; MBE of III-V and III-nitride heterostructures for optoelectronic devices with emission wavelengths from THz to ultraviolet; MBE of III-V semiconductors for mid-infrared photodetectors and solar cells; dilute magnetic semiconductor materials and ferromagnet/semiconductor heterostructures and their application to spintronic devices; applications of bismuth-containing III-V semiconductors in devices; MBE growth and device applications of Ga<sub>2</sub>O<sub>3</sub>; Heterovalent semiconductor structures and their device applications; and more. Includes chapters on the fundamentals of MBE Covers new challenging researches in MBE and new technologies Edited by two pioneers in the field of MBE with contributions from well-known MBE authors including three Al Cho MBE Award winners Part of the Materials for Electronic and Optoelectronic Applications series Molecular Beam Epitaxy: Materials and Applications for Electronics and Optoelectronics will appeal to graduate students, researchers in academia and industry, and others interested in the area of epitaxial growth.

Molecular Beam Epitaxy and Heterostructures - L.L. Chang

2012-12-06

The NATO Advanced Study Institute on "Molecular Beam Epitaxy (MBE) and Heterostructures" was held at the Ettore Majorana Center for Scientific Culture, Erice, Italy, on March 7-19, 1983, the second course of the International School of Solid-State Device Research. This volume contains the lectures presented at the Institute. Throughout the history of semiconductor development, the coupling between processing techniques and device structures for both scientific investigations and technological applications has time and again been demonstrated. Newly conceived ideas usually demand the ultimate in existing techniques, which often leads to process innovations. The emergence of a process, on the other hand, invariably creates opportunities for device improvement and invention. This intimate relationship between the two has most recently been witnessed in MBE and heterostructures, the subject of this Institute. This volume is divided into several sections. Chapter 1 serves as an introduction by providing a perspective of the subject. This is followed by two sections, each containing four chapters, Chapters 2-5 addressing the principles of the MBE process and Chapters 6-9 describing its use in the growth of a variety of semiconductors and heterostructures. The next two sections, Chapters 10-11 and Chapters 12-15, treat the theory and the electronic properties of the heterostructures, respectively. The focus is on energy quantization of the two dimensional electron system. Chapters 16-17 are devoted to device structures, including both field-effect transistors and lasers and detectors.

**Silicon molecular beam epitaxy** - 1983

**Silicon-molecular Beam Epitaxy** - 1988

Proceedings of the Second International Symposium on Silicon Molecular Beam Epitaxy - John Condon  
 Bean 1988

*Growth of Strained III-V Semiconductors by Molecular Beam*

*Epitaxy* - Michael Ekenstedt 1993

The Technology and Physics of  
Molecular Beam Epitaxy - E.H.C.  
Parker 2014-05-14

**Materials Fundamentals of Molecular  
Beam Epitaxy** - Jeffrey Y. Tsao  
2012-12-02

The technology of crystal growth has advanced enormously during the past two decades. Among, these advances, the development and refinement of molecular beam epitaxy (MBE) has been among the most important. Crystals grown by MBE are more precisely controlled than those grown by any other method, and today they form the basis for the most advanced device structures in solid-state physics, electronics, and optoelectronics. As an example, Figure 0.1 shows a vertical-cavity surface emitting laser structure grown by MBE. \* Provides comprehensive treatment of the basic materials and surface science principles that apply to molecular beam epitaxy \* Thorough enough to benefit molecular beam epitaxy researchers \* Broad enough to benefit materials, surface, and device researchers \* References articles at the forefront of modern research as well as those of historical interest

**Molecular Beam Epitaxy** - Mohamed Henini 2018-06-27

Molecular Beam Epitaxy (MBE): From Research to Mass Production, Second Edition, provides a comprehensive overview of the latest MBE research and applications in epitaxial growth, along with a detailed discussion and 'how to' on processing molecular or

atomic beams that occur on the surface of a heated crystalline substrate in a vacuum. The techniques addressed in the book can be deployed wherever precise thin-film devices with enhanced and unique properties for computing, optics or photonics are required. It includes new semiconductor materials, new device structures that are commercially available, and many that are at the advanced research stage. This second edition covers the advances made by MBE, both in research and in the mass production of electronic and optoelectronic devices. Enhancements include new chapters on MBE growth of 2D materials, Si-Ge materials, AlN and GaN materials, and hybrid ferromagnet and semiconductor structures. Condenses the fundamental science of MBE into a modern reference, speeding up literature review Discusses new materials, novel applications and new device structures, grounding current commercial applications with modern understanding in industry and research Includes coverage of MBE as mass production epitaxial technology and how it enhances processing efficiency and throughput for the semiconductor industry and nanostructured semiconductor materials research community Molecular Beam Epitaxy Deposition and Characterization of Thin-film Thermoelectric Devices - Rajeev Singh 2005

**Papers Presented at the Workshop on  
Molecular Beam Epitaxy - Growth  
Physics and Technology** - Workshop on  
Molecular Beam Epitaxy - Growth  
Physics and Technology 2000