



Smithsonian  
*National Museum of American History*  
*Kenneth E. Behring Center*

## Guide to the Ladislaus Laszlo Marton Collection

NMAH.AC.0100  
Robert S. Harding

1984

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## Collection Overview

<b>Repository:</b>	Archives Center, National Museum of American History
<b>Title:</b>	Ladislaus Laszlo Marton Collection
<b>Identifier:</b>	NMAH.AC.0100
<b>Date:</b>	1932 - 1970
<b>Extent:</b>	4.66 Cubic feet (14 boxes, one (1) 16 mm film)
<b>Source:</b>	Electricity and Modern Physics, Division of, NMAH, SI. Marton, Ladislaus Laszlo, 1901-1979 (physicist)
<b>Language:</b>	English

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## Administrative Information

### Acquisition Information

Collection donated by Ladislaus Laszlo Marton, circa 1970.

### Provenance

Transferred from the Division of Electricity to the Archives Center, March 30, 1984.

### Processing Information

Collection processed by Robert Harding, 1984

### Preferred Citation

Ladislaus Laszlo Marton Collection, 1932-1970, Archives Center, National Museum of American History

### Restrictions

Collection is open for research.

### Conditions Governing Use

Collection items available for reproduction, but the Archives Center makes no guarantees concerning copyright restrictions. Other intellectual property rights may apply. Archives Center cost-recovery and use fees may apply when requesting reproductions.

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## Biographical / Historical

Ladislaus L. Marton 1901 1979 was a physicist best known for his pioneer work in electron physics, specifically in electron microscopy, electron optics, and electron interferences and scattering. He came

to the United States in 1938, and became a naturalized citizen in 1944. He was a member of the faculty at the University of Brussels (Belgium), 1928 1938, and assistant professor from 1933 1938. He was a research physicist at the RCA Manufacturing Company from 1938 1941. He was associate professor of electron optics, head division Stanford University, 1941 1946. He was a physicist from 1946 1970 at the National Bureau of Standards in Washington. Until his death he was an honorable research associate at the Smithsonian Institution.

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## Scope and Contents

This collection consists of materials documenting the history of electron optics, especially electron microscopes. Included are engineering drawings of Marton's devices, designed in Belgium, Stanford and RCA in the 1930s and 1940s; notebooks concerning extensive investigations in electron microscopy; photographs and micrographs concerning development work in this area of physics; correspondence 1930s 702; and reprints of scientific literature relating to Marton's interests.

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## Arrangement

The collection is divided into three series.

Series 1: Notebooks, electron microscope, 1920s, undated

Series 2: Photographs, undated

Series 3: Printed Materials, 1940-1970

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## Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

### Subjects:

- Electron interference
- Electron microscopy
- Electron optics
- Electron physics
- Electron scattering
- Optics
- Physicists
- Physics

### Types of Materials:

- Blueprints
- Correspondence -- 20th century
- Diagrams
- Drawings -- 20th century
- Lantern slides
- Notebooks
- Photographs -- Black-and-white photoprints -- Silver gelatin -- 19th-20th century

Photographs -- Phototransparencies -- 20th century  
Slides (photographs)

Names:

Electricity and Modern Physics, Division of, NMAH, SI.  
United States. National Bureau of Standards

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## Container Listing

### Series 1: Notebooks, Electron Microscope, 1920s, undated

Box 1                      Notebooks on the Electron Microscope , 1920s, undated

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## Series 2: Photographs

Box 5

Electron Microscope, Division of Electron Optics, Stanford University,  
Miscellaneous Photos

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## Series 3: Printed Materials , 1940 - 1970

Box 6	American Scientist Volume 35, Number 1 January, 1947
Box 6	Diagrams
Box 6	Past and Present of the Charge Control Concept in the Characterization of the Bipolar Transistor, by J te Winkel
Box 6	Low Temperature Rare Gas Stationary Afterglows by J F. Delphech et al.
Box 6	Errata et Addenda
Box 6	Low Temperature Helium Plasmas, by J F Delpech
Box 6	Scientia: La theorie de Maxwell et les oscillations Hertiennes, by H. Roicare' Jacket and pages 27 & 28
Box 6	Sales Literature: Drake TR 7
Box 6	Electron Microdiffraction by J.M. Cowley
Box 7	Photographs of Curd fibers of Sodium Laurate with Observation; and correspondence, 1940 41
Box 7	Advances in Electronics
Box 7	Outline of Course in Electron Optics
Box 7	"It is for us, the Living..." Book on Stanford
Box 7	Engineering Report "Production of Measurement of Low Pressures" by William Ayer
Box 7	Engineering Report "Production of Measurement of Low Pressures" by Laurence Manning
Box 7	Engineering Report "Production of Measurement of Low Pressures" by Aldo Viera da Rosa
Box 7	Engineering Report "Production of Measurement of Low Pressures" by Helio Costa
Box 7	Engineering Report "Production and Measurement of High Vacuums by C.D. Maurer



Box 7                    Engineering Report "Production and Measurement of High Vacuums by Robert W. Fischer

Box 8                    "The Lifetimes of Metastable Negative Ions by L.G. Christophorou (2 copies)

Box 8                    Time Resolved Laser Fluorescence Spectroscopy by J F Delpuch & J C Gauthier

Box 8                    Electron Microdiffraction by J.M. Cowley

Box 8                    Charge Transfer Devices by Carol H. Sequin & Michael F. Tompsett

Box 9                    Copies of Author Index, Subject Index, Advances in Electronic and Electron Physics

Box 9, Folder 2            Electron Micrographs Analysis by Optical Transforms by G. Donelli & L. Paoletti

Box 9, Folder 2            Electron Beams as Analytical Tools in Surface Research: LEED and AES by L. Fiermans and J. Vennik

Box 9, Folder 1            The Energy Spectrum of Electrons Emitted by Hot Cathode by Wolfgang Franzen & John H. Porter

Box 9, Folder 2            Recent Advances in Electron Beam Addressed Memories by John Kelly

Box 9, Folder 2            X ray Image Intensifiers by Kirby G. Vosburgh, Robert K. Swank & John M. Houston

Box 9, Folder 3            Author Index

Box 9, Folder 4            Subject Index Adv. in Electron Physics

Box 9, Folder 5            Subject Index Adv. in Elec. Physics

Box 9, Folder 6            Author Index Adv. in Elec. Volume 43

Box 9, Folder 7            Author Index

Box 9, Folder 8            Wire Antennas by P.A. Ramsdale

Box 9, Folder 9            Characterization of the MOSFET Operating in Weak Inversion by Paul A. Muls, Gilbert J. Declerk, & Roger J. Van Overstraeten

- Box 9, Folder 10 Modeling of the Transient Response of an MIS Capacitor by T.W. Collins,  
\*J.N. Churchill, F.E. Holmstrom & A. Moschwitzer
- Box 9, Folder 11 Ion Beam Technology applied to Electron Microscopy by J. Franks
- Box 9, Folder 12 Microprocessors and Their Use in Physics by Anthony J. Davies
- Box 9, Folder 13 Microwave Power Semiconductor Devices Critical Review by S. Teszner and  
J.L. Teszner
- Box 9, Folder 14 Author Index
- Box 9, Folder 15 Subject Index
- Box 9, Folder 16 Advances in Electronics and Electron Physics Vol. 45
- Box 9, Folder 17 Author Index Elec. Phys. 45
- Box 9, Folder 18 Subject Index Adv. in Elec. Vol. 5
- Box 9, Folder 19 Advances in Electronics and Electron Physics Vol. 47
- Box 9, Folder 20 Advances in Electronics and Electron Physics Vol. 43
- Box 10, Folder 1 10th Electron Ion and Laser Beam Technology Symposium (EILBT file II)  
Notebook: papers concerning 11th symposium ELIBT University of Colorado  
Boulder May 12-14, 1971.
- Box 10, Folder 1 Hybrid Computer Aided Synthesis of Thick Electrostatic Electron Lenses by  
J. Robert Ashley
- Box 10, Folder 1 Double Deflection Aberrations in a Scanning Electron Microscope by E.D.  
Wolf & K. Amboss
- Box 10, Folder 1 The Minium Beam Diameter Obtainable in Electron Probe Apparatus by A.N.  
Broers & H.C. Pfeiffer
- Box 10, Folder 1 A Computer Analysis of Several Shaped, Two Electrode, Immersion Lenses  
That Minimize Spherical Aberration by D.L. Fraser, Jr., W.J. Meyers, & T.G.  
Elser
- Box 10, Folder 1 The Third Order Aberrations of Magnetic Electron Lenses by M.B. Heritage
- Box 10, Folder 1 Analytical Solution of the Axial Potential for a Three Element Electrostatic  
Lens by H.G. Parks

Box 10, Folder 1	Experimental Investigation of Energy Broadening in Electron Optical Instruments by Hans C. Pfeiffer
Box 10, Folder 1	Correspondence , 1970 - 1971
Box 10, Folder 2	Electron Ion and Laser Beam Technology Correspondence 1970 & Proposals
Box 10, Folder 3	IEEE 1970 Correspondence
Box 10, Folder 4	Missing?
Box 10, Folder 5	Minutes of 10th SEILBT
Box 10, Folder 6	EILBT Request for call for Papers and Acceptance Cards & Programs

### 10th Electron Ion and Laser Beam Technology Symposium

#### *Box 11, Folder 1*

Box 11, Folder 2	10th Electron Ion and Laser Beam Technology Symposium, Susskind
Box 11, Folder 3-4	10th Electron Ion and Laser Beam Technology Symposium
Box 11, Folder 5	10th Electron Ion and Laser Beam Technology Symposium, ELBS Berkeley California
Box 11, Folder 6	10th Electron Ion and Laser Beam Technology Symposium, 8th annual symposium of ELBT University of Michigan April 6 8, 1966

Box 12                      Solid State Materials

Box 13                      Molecular Beams: Pamphlets and articles

### Correspondence; Experiments; A U Material

Box 14	Correspondence: Marton & Professor Andrea Pinciroli, 1968 69; Pinciroli papers on Electron Beam Propagation
Box 14	Experiment: Glass Blowing
Box 14	Experiment: Electrolytic Models of Potential Fields
Box 14	Experiment: 1 Production & Measurement of Low Pressures

- Box 14                    Experiment: 3 Production & Measurement of Low Pressures
- Box 14                    Experiment: 3 Production & Measurement of High Vacuums
- Box 14                    Experiment: Elastic Membrane determination of Electron Paths
- Box 14                    Experiment: Pumping Speed and degassing
- Box 14                    Experiment: Calculation of Electron Paths
- Box 14                    Graph: Potential Distribution between Cylinders spaced one sixteenth  
Diameter
- Box 14                    Portraits of Scientists (glass slides)
- Box 14                    16mm Film on Stanford Electron Microscope

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