



Smithsonian

National Museum of American History Kenneth E. Behring Center

Guide to the Ladislaus Laszlo Marton Collection

NMAH.AC.0100

Robert S. Harding

1984

Archives Center, National Museum of American History
P.O. Box 37012
Suite 1100, MRC 601
Washington, D.C. 20013-7012
Business Number: Phone: 202-633-3270
Fax Number: Fax: 202-786-2453
archivescenter@si.edu
<https://americanhistory.si.edu/archives>

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Collection Overview

Repository:	Archives Center, National Museum of American History
Title:	Ladislaus Laszlo Marton Collection
Date:	1932 - 1970
Identifier:	NMAH.AC.0100
Source:	National Museum of American History (U.S.). Division of Electricity and Modern Physics (Collector)
Creator:	Marton, Ladislaus Laszlo, 1901-1979 (physicist) (Author)
Extent:	4.66 Cubic feet (15 boxes, one (1) 16 mm film)
Language:	Some materials in Dutch, German and French.

Administrative Information

Acquisition Information

Collection donated by Ladislaus Laszlo Marton, circa 1970.

Provenance

Collection transferred to the Archives Center from the Division of Electricity (now Division of Work and Industry), 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.

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.

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-70s; and reprints of scientific literature relating to Marton's interests.

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

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:

National Museum of American History (U.S.). Division of Electricity and Modern Physics
United States. National Bureau of Standards

Container Listing

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

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

Box 2 Notebooks on the Electron Microscope

Box 3 Notebooks on the Electron Microscope

Box 4 Notebooks on the Electron Microscope

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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 Delpech & 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. Moschwitz
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. Tetzner and J.L. Tetzner

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) Notes: 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
Box 15, Box 1	notes, sketches, and writings, 1927-1935
Box 15, Box 2	Drawings and sketches for [microscopes/], undated
Box 15, Box 3	Photozeller [publications] and notes, undated
Box 15, Box 4	Notes and equations, 1948
Box 15, Box 5	Correspondence and notes, 1936-1938
Box 15, Box 6	Drawings and charts, undated

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Box 2 (Addenda)	Addenda
Box 3 (Addenda)	Addenda