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“When I get a little money I buy books; and if any is left I buy food and clothes”. Erasmus (1467-1536)
A facsimile English edition of Gellert’s Metallurgic Chymistry

First published in German in 1751, with an introduction by Fathi Habashi. ISBN 2-980-3247-3-6, 500 pages, $ 60 + postage. August 1998

A HISTORY OF METALLURGY

Edited by Fathi Habashi

A collection of articles on the history of extractive metallurgy originally published in History of Technology between 1954 and 1958. The articles were edited and indexed to form a coherent textbook for educational purpose, with an introduction by the editor. 330 pages, 123 Figures. ISBN 2-980-3247-1-X, $ 35 + Postage.

Table of Contents

1. Introduction
2. From Early Times to the Fall of Ancient Empires
3. The Mediterranean Civilizations and the Middle Ages
4. From the Renaissance to the Industrial Revolution
5. The Industrial Revolution
6. The Late Nineteenth Century
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READINGS IN HISTORICAL METALLURGY SERIES

VOLUME 1- Changing Technology in Extractive Metallurgy [published 2006]

==================================================================
VOLUME 2- Selected Topics for Metallurgists [in preparation]

1- Social Responsibility of Scientists
2- Medicine and the Mining Industry
3- History of Corrosion Research
4- History of the Fertilizer Industry
5- Liquid Air
6- Hydrogen and the Metallurgical Industry
7- History of Amber
8- History of Diamonds
9- Metals, Coins, and Mints
10- Mirrors through the Ages
11- Meteorites. History, Mineralogy, and Metallurgy
12- Casting in History
13- Mining, Metallurgy, and the Church
14- Ingenious Inventors
15- Metallurgical Chemistry, the Four Elements, and the Phlogiston
16- RareEarths. A Recollection

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VOLUME 3- Education & Cultural Heritage [in preparation]

Part I Education
1- History of Engineering Education
2- Philanthropy and Education
3- Migration of Scholars. A Study in the Diffusion of Knowledge in Mining and Metallurgy
4- Schools of Mines
5- Chemical Technology versus Chemical Engineering
6- Mining Education in Canada
7- Mining Education in USA
8- Mining Education in the Far East
9- Prolific Textbook Writers
10- Advices to New Graduates

Part II- Cultural Heritage in Mining & Metallurgy
1- Enlightened Depots, Science, and Culture
2- Historic Landmarks, ASM [Delhi Pillar, Iron Bridge, Antofagasta, Ytterby, the First Oil well..]
3- Cultural Heritage in Geosciences, Mining, and Metallurgy
4- Mining Traditions
5- Mining Museums [Wieliszica, Falun, ..]
6- Metallurgy Museums [Forges, Iron Museums, ..]
7- Historic Libraries [New France, Chemical Heritage Foundation, Osler, Miskolc, Ferrum, ..]
8- Mining and the Arts
9- Metallurgy and the Arts

==================================================================
Volume 4- Associations [in preparation]

1- Born’s Society
2- CMMI
3- IMPC
4- CIM
5- MetSoc
6- CMQ
7- ACS
This book is a supplement to the author’s book *A History of Metallurgy* which he edited in 1994. In the present work he records the changes in the metallurgical unit operations that took place over the centuries. Any metallurgist who does not grasp the historical background of his profession, its relation to the chemical industry, and its connection to today’s technology is missing a great deal in his or her education. The book is in 775 pages, illustrated by 490 Figures many of them in color, contains over 165 biographical notes of the scientists and engineers who contributed to this endeavour, and selected references in each chapter for further reading.

ISBN 2-922686-02-7

Published March 2006

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3- Changing Technology

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5- Agricola (1494-1555)  
6- Ercker (1530-1594)  
7- Barba (1569-1762)  
8- De Réaumur (1683-1757)  
9- Gellert (1713-1795)

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**Part Four PYROMETALLURGY**
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23- Refining by Chemical Transport Reactions

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28- Processing of Copper Sulfide Concentrates  
29- Bacterial Leaching  
30- Treatment of Leach Solution

**Part Six ELECTROMETALLURGY**
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Price: Can $ 95 + Postage
Kinetics of Metallurgical Processes

By
Fathi Habashi

The book covers the general principles of heterogeneous noncatalyzed reactions which are the basis of extractive metallurgy. ISBN: 2-980-3247-6-0, 376 pages, $ 50 + postage. September 1999

Table of Contents

Part One - General
1. Scope
2. Homogeneous Reactions
3. Physical and Physico-chemical Processes
4. Radioactive Decay

Part Two – Heterogeneous Reactions
5. The Solid Interface
6. The Boundary Layer
7. The Formation of Solid Reaction Products
8. Experimental Methods

Part Three – Applications
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Mining and Metallurgy on Postage Stamps

By: Fathi Habashi, David Hendricker, and Claude Gignac

Mining and Metallurgy on Postage Stamps is intended to give a historical background to mining and metallurgy by presenting about 900 enlarged reproductions of colored stamps from different countries. Explanations are given in simple language to bring these topics to young people, philatelists, and educators. ISBN 2-980-3247-4-4. 320 pages, $ 250 + postage. Published June 1999. WINNER OF SILVER MEDAL

Fathi Habashi, Professor of Extractive Metallurgy at Laval University, Québec. David G. Hendricker, Professor of Chemistry at Ohio University, Athens, USA. Claude Gignac, Chemist, Ministry of the Environment of Québec.
TEXTBOOK
of
HYDROMETALLURGY
SECOND EDITION
by
Fathi Habashi

The book covers the general principles of solution chemistry, engineering aspects, and
detailed studies of hydrometallurgical processes in 750 pages fully illustrated with
drawings and photographs. It contains a selected list of over 250 review articles,
proceedings volumes, and books directly related to the subject. Emphasis is laid on

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Principles of Extractive Metallurgy

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Amalgam and Electrometallurgy

By: Fathi Habashi


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10. Electrorefining from Fused Salts

Part Two – Electrometallurgy
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6. Electrowinning from Fused Salts. Part I
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13. Applications

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POLLUTION PROBLEMS IN THE MINERAL AND METALLURGICAL INDUSTRIES

By Fathi Habashi

This is a short account showing how technology changes to render the workplace in these industries more acceptable and to minimize pollution of the environment. The book is illustrated by 70 photographs and drawings and contains extensive bibliographic references, ISBN: 2-980-3247-2-8, 150 pages. $ 25 + postage. August 1996. Translated in Vietnamese in 2005

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Chapter 2. Dust Separation
Chapter 3. Iron and Steel Industry
Chapter 4. Aluminum Industry
Chapter 5. Treatment of Sulphide Ores
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Chapter 7. Radioactive Ores
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PERIODIC TABLE
Designed by Fathi Habashi

- T-Shirts all sizes, $25 + postage
- Plastified sheets 8½ x 11 inch, $2 + postage

Fathi Habashi, "A New Look at the Periodic Table", Interdisciplinary Science Reviews 22 (1), 53-60 (1997)
EXTRACTIVE METALLURGY TODAY.
Progress and Problems

By Fathi Habashi

Represents a collection of lectures delivered by the author on his trips abroad. It also summarizes his researches during his association with Laval University. In a way, it is a scientific autobiography in 325 pages illustrated by 162 pictures of which 75 are in color. Published April 2000. Price 90 + Postage. ISBN: 2-9803247-8-7

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2. Research and development
12. Recovery of copper from sulfide concentrates
13. Recovery of copper from leach solutions

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18. Conference proceedings

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TEXTBOOK OF PYROMETALLURGY

By Fathi Habashi
Professor of Extractive Metallurgy
Laval University, Quebec City, Canada

The book describes systematically the thermal processes for the extraction of metals from their ores and their refining in a pure form. It includes a historical introduction, basic theoretical principles, and a selected list of references. 615 pages. ISBN 2-922686-05-1. Published August 2002. Price 70 + Postage.

Part 1 - Introduction
Part 2 - Engineering Aspects
Part 3 - Preliminary Treatment
Part 4 - Metal Separation
Part 5 - Refining
Appendix, Index

The book tells the story of the beginnings of chemistry and the extraction of metals from their ores, how these disciplines were reformed, developed, and became basic and applied sciences. In association with physicists, engineers, and technicians, chemists and metallurgists built the most terrible weapons of mass destruction. The book is in 365 pages with 220 illustrations, 30 of them in color. ISBN 2-922-686-00-0. Published September 2002. Price Can.$ 70 + postage.

Table of Contents:
1. Mythology
2. The Four Elements
3. Alchemy
4. The Alchemists
5. Reform in Chemistry, Mineralogy, and Metallurgy
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7. Classification of the Elements
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9. Radioactivity: Chemistry and Physics United
10. Uranium Fission
11. Atomic Bombs
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The Beginnings of Mining and Metallurgical Education

The book outlines the history of these institutions, their outstanding teaching staff, and their distinguished graduates. They formed the foundation for the scientific and technical development of the mineral industry in all its sectors. More than 600 pages illustrated with 350 figures and maps of which 73 are in color, includes the history of 92 schools, over 400 biographies, over 100 selected references, and 27 pages of indexes. ISBN-2-980-3247-9-5. Published February 2003. Price Can. $ 80 + postage.

Table of Contents:
Part 1: General
Part 2: Schools of Mines in the Great European Empires
Part 3: Schools of Mines in Other European Kingdoms
Part 4: Schools of Mines in the Americas and the Far East
Part 5: Epilogue and Appendix
Indexes
In 475 pages incorporating 215 illustrations (50 in color) and numerous Tables, the reader can get a clear idea about what are metals, how they are enriched by natural processes in the Earth’s crust, how they are located by geophysicists, exploited by mining engineers, concentrated by mineral dressing engineers, and finally treated by extractive metallurgists to get pure metals for everyday life. The book also includes a short historical account, basic theory, and an appendix giving a summary of the extraction scheme of each metal as well as a list of audiovisual documents related to metal extraction. The book contains also questions and problems for students and a comprehensive index. ISBN 2-922686-04-3. Published August 2003, price Can. $ 80 + postage.

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| Part 3. Extractive Processes            |                                           |

Metals from Ores

An Introduction to Extractive Metallurgy

By: Fathi Habashi
In 160 pages the author tells the story of Ida Noddack, the distinguished chemist who discovered the metal rhenium in 1925 and predicted the “splitting” of the uranium atom in 1934. He relates the circumstances under which he met her and her husband Walter Noddack in 1955, and then met her again in 1969. The book is illustrated with numerous photographs, many of them in colour and contains facsimile of 12 letters and 4 historical papers by Ida Noddack. ISBN 2-922686-08-6. Published February, 2005. Price Can. $ 35 + postage

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1. Biographical Note
2. Meeting the Noddacks
3. IUPAC 1961
4. Rhenium 1965
5. Hydrometallurgy 1969
6. Ida Noddack 75 & Element 75
7. The Missing Elements
8. Nuclear Research at the Time of Noddacks
9. Germany at the Time of Noddacks
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Edited by Fathi Habashi

Published 1998 by WILEY-VCH.

This handy yet authoritative reference work provides essential information on alloys in one compact volume. Classification, properties, preparation, applications, and economic aspects are discussed for alloy steels, primary-metal alloys, light-metal alloys, and other alloy systems. The work is based on the effort of over 60 specialists, supplying hundreds of top-quality illustrations, diagrams, and charts and provides hand-picked references for further study. An introductory overview of the subject is provided by the editor.

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