

Table of Contents

Preface

Improving detector signal processing with pulse height analysis in Mössbauer spectrometers

J. Pechousek · M. Mashlan · J. Frydrych · D. Jancik · R. Prochazka 1

Room temperature ^{57}Fe Mössbauer spectroscopy of ordinary chondrites from the Atacama Desert (Chile): constraining the weathering processes on desert meteorites

M. Valenzuela · Y. Abdu · R.B. Scorzelli · M. Duttine · D. Morata · P. Munayco 9

The metallurgic furnaces at the Curamba Inca site (Peru): a study by Mössbauer spectroscopy and X-ray diffractometry

Y. Huaypar · L. Vetter · J. Bravo 15

Study of the structural modifications in activated clays by Mössbauer spectroscopy and X-ray diffractometry

Y. Huaypar · J. Bravo · A. Gutarra · E. Gabriel 23

Magnetic and structural properties of mechanically alloyed $\text{Tb}_{0.257-x}\text{Nd}_x\text{Fe}_{0.743}$ alloys, with $x=0$ and 0.257

Y.R. Martinez · H.B. Rodriguez · D.O. Lozano · G.A.P. Alcázar · J.C. Paz 29

Mössbauer and magnetic studies of parent material from argentine pampas soils

J.C. Bidegain · A.A. Bartel · F.R. Sives · R.C. Mercader 35

Multivariate analysis in provenance studies: Cerrillos obsidians case, Peru

A. Bustamante · M. Delgado · R.M. Latini · A.V.B. Bellido 43

Synthesis and characterization of $\text{Fe}_6\text{W}_6\text{C}$ by mechanical alloying

W. Barona Mercado · J. Cuevas · I.Y. Castro · M. Fajardo · G.A. Pérez Alcázar · H. Sánchez Sthepa 49

Iron-containing pyrochlores: structural and magnetic characterization

C.K. Matsuda · R. Barco · P. Sharma · V. Biondo · A. Paesano Jr. · J.B.M. da Cunha · B. Hallouche 55

Study of the effect of Mn and Cu in Fe–Mn–Al–C–Cu alloys by ICEMS and XRD

J.D. Betancur-Ríos · J.A. Tabares · G.A. Pérez Alcázar · V.F. Rodríguez 63

Mössbauer investigation of maghemite-based glycolic acid nanocomposite

J.G. Santos · L.B. Silveira · A.C. Oliveira · V.K. Garg · B.M. Lacava · A.C. Tedesco · P.C. Moraes 71

Structural, Mössbauer and magnetic studies on Mn-substituted barium hexaferrites prepared by high energy ball milling

P. Sharma · R.A. Rocha · S.N. de Medeiros · A. Paesano Jr · B. Hallouche 77

Provenance study of obsidians from the archaeological site of La Maná (Ecuador) by electron spin resonance (ESR), SQUID magnetometry and ^{57}Fe Mössbauer spectroscopy
M. Duttine · R.B. Scorzelli · G. Poupeau · A. Bustamante · A.V. Bellido · R.M. Lattini · N. Guillaume-Gentil 85

Mössbauer investigation of magnetite nanoparticles incorporated in a mesoporous polymeric template
A.F.R. Rodriguez · V.K. Garg · A.C. Oliveira · D. Rabelo · P.C. Morais 91

Distribution of Fe-bearing compounds in an Ultisol as determined with selective chemical dissolution and Mössbauer spectroscopy
C. Pizarro · J.D. Fabris · J. Stucki · V.K. Garg · C. Morales · S. Aravena · J.L. Gautier · G. Galindo 95

Structural, magnetic and hyperfine characterization of zinc-substituted magnetites
A.C.S. da Costa · I.G. de Souza Jr. · M.A. Batista · K.L. da Silva · J.V. Bellini · A. Paesano Jr. 103

Magnetic investigation of iron-nitride-based magnetic fluid
C.B. Teixeira · L.S.F. Olavo · K. Skeff Neto · P.C. Morais 113

Author Index