

TABLE OF CONTENTS

Editorial	i
Dating—Authenticity	
Individual Age Estimation Based on the D-aspartic and D-glutamic Acid of Teeth J. Csapó, Zs. Csapó-Kiss, É. Varga-Visi, G. Pohn and M. Collins	1
New Prospects in Obsidian Hydration Dating: An Integrated Approach LLiritzis, CM. Stevenson, S.W. Novak, I. Abdelrehim, V. Perdikatsis and M. Bonini	9
Luminescence Dating Beyond Pottery: a Review N. Zacharias	23
Hunting out Forgers of Archaeological Marble Objects: Reviewing the Archaeometrist's Role as a Detective K. Polikreti	31
Accelerator Mass Spectrometry Dating of Epicurus "De Natura" papyrus from Herculaneum C. Lubritto, F. Terrasi, A. D'Onofrio, C. Sabbarese, F. Marzaioli, I. Passariello, A. Palmieri, G. Casa, D. Rogalla, M. Rubino, G. Imbriani, M. Romano, L. Gialanella, V. Roca, C. Rolfs, M. Glancaspro, and A. Travaglione.	37
A Single Aliquot Polymineral TL Protocol Applied for Fired Materials C.T. Michael, N. Zacharias, I. Lefakis and D. Dimotikali	41
Comparative Studies on the Determination of Environmental Radiation Doses N. Zacharias, M. Štuhec, V. Kilikoglou, Y. Bassiakos, C.T. Michael 1, E. Vardala-Theodorou, G. Theodorou4, D. Dimotikali	45
Altered Archaeological Pottery and the Effect on TL Dating N. Zacharias, C.T. Michael, A. Schwedt and H. Mommsen	51
Geophysical Prospection	
The Canal of Xerxes in Northern Greece: Fact or Fiction? Recent Geophysical and Geoarchaeological Investigations B.SJ. Isserlin, M. Arvanitis, R.E. Jones, V. Karastathis, S.P. Papamarinopoulos, P. Stephanopoulos, G. Syrides and J. Uren	59
The Reconstruction of Prehistoric Shorelines in Dokos Island, Aegean Sea, Using Remote Sensing Techniques G. Papatheodorou, M. Geraga and G. Ferentinos	65
Identifying Burned Mud Brick Buildings using Fluxgate Magnetometry M. Boyd and N. Brodie	73
Application of Near-surface Geophysical Tools and GIS for Mapping the Ancient City of Lefkas A. Sards, S. Topouzi, F. Triantafyllidis, S. Soetens and G. Pliakou	77
Geophysical Research at Syntagma Square, Athens - Relationship to Geology and Ancient Texts M.G. Papaioannou, S. P. Papamarinopoulos and P. Stefanopoulos	85
Integrated Geophysical Studies at Ancient Itanos (Greece) A. Vafidis, A. Sarris and TH. Kalpaxis	89
The Geophysical Research at the Church of St. Theodora at Vasta Megalopolis, Greece St. P. Papamarinopoulos, P. Stefanopoulos, M. G. Papaioannou, N. Charkiolakis and Ch. Vachliotis	99
Investigation of a Monumental Macedonian Tumulus by Three Dimensional Seismic Tomography L. Polymenakos, S. Papamarinopoulos, A. Liassis and Ch. Koukouli - Chryssanthaki	107
Geophysical Investigations in Pelasgia & Andron A. Sarris, S. Topouzi, S. Soetens, A. Baba, M-F. Papakonstantinou and K. Psarogianni	113

Use of Remote Sensing and GIS Methods in the Reconstruction of Coastal Palaeogeography of Alexandria, Egypt	119
A. Chalari, D. Christodoulou, G. Papatheodorou, M. Geraga, A. Stefatos and G. Ferentinos	
Prospecting of the City Wall at the Asea Prehistoric Site (Greece) Using Geoelectric and GPR Techniques	129
M. Dogan, St.P. Papamarinopoulos and P. Stefanopoulos	
Geoarchaeology	
The Most Famous Eruption of the Thera Volcano: a Review of More Than Sixty Years of Studies	141
V. M. Francaviglia	
Between Peak and Palace. Reinterpretation of the Minoan Cultural Landscape in Space and Time	153
S. Soetens, A. Sarris and K. Vansteenhuyse	
Geological Contribution to the Stratigraphic Study of the Palaeolithic Sediments at the Lakonis Beach, Gythion, Greece	163
E. Chirotis	
Troy - Geomorphologic Changes in the Valley of the River Scamander	171
P. Malfas	
Palaeoenvironment - Palaeodiet	
Cooking Ingredients from Bronze Age Archondiko: the Archaeobotanical Evidence	187
S.M. Valamoti, A. Papanthimou and A. Pilali	
Seasonality and Radiology: a Pilot Application on Red Deer (<i>Cervus Elaphus</i>) Dentaries from the Upper Palaeolithic Cave of Kastritsa, NW Greece	195
E. Kotjabopoulou and C.N. Kaftantzis	
From Sea to Land: the Exploitation of Molluscs in the Geometric Artisan Site of Skala Oropou, Attica	205
T. Theodoropoulou	
Elemental Analysis of Bones and Diet Reconstruction of the Inhabitants of Thracia (Bulgaria) in the Hellenistic Period	215
B. Zlateva, I. Kuleff, R. Djingova, M. Kuzmanov and D. Gergova	
Palaeoanthropology	
In Search of Mothers and Daughters in 3000 Year Old Burials in Northern Greece	225
L. Kovatsi, S. Triantafyllou, J. Eliopoulos, M. Besios, S. Andreou, A. S. Tsaftaris, A. Dimitriadou and S. Kouidou	
Ancient DNA Extraction and Amplification of Human Bone Samples from the Area of Delphi: a Pilot Case Study	233
K. Koniavitou, Chr. Kroupis, A. Kapsalis, L. Karali, PL Petridis and F. Mavridis	
Pygmies, Sciapodes, Macrocephali, Argippeans: mythical Or Existential Tribes?	241
Euterpe Bazopoulou-Kyrkanidou	
Ceramics And Glass	
The Significance of Fabric Diversity in Neolithic Knossos Ceramics	249
S. Dimitriadis	
Early Helladic II Pottery From Thebes: an Integrated Typological, Technological and Provenance Study	263
J. Hilditch, E. Kiriatzi, K. Psaraki and V. Aravantinos	
Regional Production Centers of Iron Age Pottery Wares in Philistia: a Provenance Study Employing Inductively-Coupled Plasma (ICP-AES and ICP-MS)	269
D. Ben-Shlomo	
Non-destructive Quantitative XRF Analysis on Greek Archaic Pottery of the	

L. Grasso, L. Pappalardo and F.P. Romano	
On the Origin of Stamped Amphorae from Thracian Cities in Bulgaria	; 287
I. Kuleff, E. Pernicka and T. Stoyanov	;
Minoan and Mycenaean Metallurgical Ceramics: Analysis on Crucibles and Mould from Kommos, South Crete	299
C. Oberweiler, Y. Maniatis and J. Shaw	
Thin Sectioning Neolithic Identities: the Red Monochrome Ware (Al) from Middle Neolithic Sesklo, Thessaly	305
A. Pentedeka and K. Kotsakis	
Imported and Local Pottery in Eastern Mediterranean Sites During the Early Byzantine Period: the Case of Eleuthema, Crete	313
A. G. Yangaki, E. Aloupi, V. Kilikoglou, A. Tsolakidou and P. Themelis	
New Evidence for Amphora Production in East Crete in the Hellenistic Period. an Integrated Approach of Typology and Thin Section Petrography	327
N. Vogeikoff-Brogan, E. Nodarou and M. C. Boileau	
Understanding the Technology of Large Storage Jars: Raw Materials and Techniques in Hellenistic and Modern Messenia	335
M. Giannopoulou and E. Kiriatzi	
The Study of Bricks of Roman Monuments	349
I. Papayianni and M. Stefanidou	
Medieval Glass Bracelets from South East Bulgaria	;
R. Georgieva, Y. Dimitriev, B. Samuneva, E. Kashchieva and L. Doncheva-Petkova	353
A Natron Source For Glass Making In Greece? Preliminary Results:	
E. Dotsika, Y. Maniatis and D. Ignatiadou	
Composition and Microstructure of Decorative Enamels Included in Roman Fibulae Found in Bulgaria	363
E. Kashchieva, R. Kirov, Y. Dimitriev and S. Tsaneva	;
Stones And Mortars	
The Material Characterization of Masonry Stones and Mortar From the Archaeological Site in Jerusalem	371
Irene Wasserman	
Exchange Networks in the Neolithic of Greece: Gabbro and Talc Objects from Drakaina Cave, Kephalonia Island, Western Greece	381
G. Stratouli and V. Melfos	
Raw Material Procurement in the Middle Palaeolithic of Thessaly: Sourcing Studies	389
P. Karkanas, E. Panapogopoulou, J. Anoussis and N. Kyparissi-Apostolika	
Assessment of Aegean Obsidian Sources by a Portable ED-XRF Analyser: Grouping, Provenance and Accuracy	399
I. Liritzis	
PGAA Analysis of Szeletian Felsitic Porphyry - Non-destructive Analysis of an Important Hungarian Palaeolithic Raw Material	407
A. Marko, Z. Kasztovszky and T. Biro, K.	
Quantitative Fabric Analysis (QFA) on Marble from West Anatolia: Application of Raster-(Fractal) and Vector-based (Geometric) Approaches	413
Judit Zoldfoldi and Balazs Szekely	;
Bronze Age Painted Plaster from the Greek Mainland: a Comparative Study of Its Technology by Means of XRD Analysis and Optical Microscopy Techniques	421
A. Brysbaert and V. Perdikatis	
Classification of Historical Mortars by Principal Component Analysis, Based	431

K. Polikreti, A. Moropoulou, A. Bakolas and P. Michailidis Technology of Mortars Used for the Substratum of Mosaics I. Papayianni and V. Pachta	437
Metals	
Analysis of Archaeological Objects with LM ^N IrI, a new Transportable LIBS Instrument K. Melessanaki, A. Mastrogianidou, S. Chlouveraki, S.C. Ferrence, P.P. Betancourfand D.Anglos	441
Quantitative Analysis of Athenian Coinage by Pixe Ch. Flament, O. Lateano and G. Demortier	445
Metal Artefacts from Early Bronze Age Poliochni on Lemnos: Archaeometric Analysis in Archaeological Perspective Ch. Flament, O. Lateano and G. Demortier	451
Towards an Integrated Approach for the Study of Ancient Greek Technology: Iron and Archaeology in Aegean Thrace M. Kostoglou	459
The Trestina Bronzes: Archaeometry and Archaeology M. Ferretti, M. Ferretti, A. Palmieri, E. Formigli, M. Miccio, R. Pecchioli, A. Romualdi, F. Lo Schiavo, E. Macnamara, B. Shefton, L. Lepore and A. Naso	469
Non Destructive Investigation of the Ag Distribution in the Late Roman Folles from about 300 to 310 ad. S. Garrafo, A. Nicolosi, G. Pappalardo, L. Pappalardo and F.P. Romano	481
Metallurgical Study of Three Bronze Rams from Warships, Dating Back to Classical, Hellenistic and Roman Times G. J. Varoufakis	487
A First Valuation of the Excavation of Ancient Washeries at Bertseko Laureotika C.G. Tsaimou	493
The Laurion Shafts of Antiquity: First Investigations and the Problems of Ventilation. Development of a Physical Model. D. Morin and R. Herbach	499
Complex Beauty: the Manufacture of Hellenistic Wreaths E. Asderaki and Th. Rehren	507
Investigating the Presence and Effects of Arsenic in Two Bloomery Iron Clots (2 nd - 3 rd C. AD) from Kerelai, Lithuania J. Navasaitis, A. Sveikauskaitė and I. Keesmann	515
A Tentative Comparison of Steel-making Crucibles from Central Asia and the Indian Subcontinent O. Papachristou and Th. Rehren	519
The Study of Ancient Copper Slags from Serifos G.D. Papadimitriou and A.Z. Fragiskos	529
Archaeometallurgical Researches in the Othris Mountains, Greece M. Tizzoni, C. Cucini Tizzoni, G. Rebay and M.P. Riccardi	535
New Evidence ov the Manufacturing Technology Used in the Production of Roman Coins (260 - 350 AD) C. Vlachou-Mogire, J.G. McDonnell and R.C. Janaway	545
Painting Media	
A Case Study of Purple Adulteration in Hellenistic Textiles E. Kampasakali, E. A. Varella, E. Pavlidou and E. Lambrothanassi	555
The Use of Red and Yellow Ochres as Painting Materials in Ancient Macedonia V. Perdikatsis and H. Brecoulaki	559
	560

A. Giannikouri, K. Andrikopoulos, S. Sotiropoulou, Sister Daniilia and Y. Chrysoulakis Identification of Proteinaceous Binding Media from Post-Byzantine Mural Paintings with Chromatographic Techniques	579
E. loakimoglou, E. Kavalieratou, E. Kouloumpis, S. Zevgiti and K. Stoupathis Biodegradation of Art Objects: Impact on Animal Glue Identification	587
A. K. Tsakalof, I. S. Aslani, F. N. Kolisis, K. A. Bairachtari and I. D. Chrysoulakis Spectroscopic Ellipsometry: a Non-Destructive Technique for Measuring the Optical Properties of Varnish Films on Paintings	595
K. Polikreti, A. Othonos, C. Christofides and C. De Deyne Typical Application of Petrographical Study for the Support of Conservation Projects in Mansions at Chios and Inousses	599
E. Polychroniadou, E. Chiotis, E. Dimou and D. Tarenidis The Artistic Traits of Gyzis: a First Diagnostic Approach to His Paintings	603
S. Sotiropoulou, Sister Daniilia, K. Andrikopoulos, G. Karagiannis and Y. Chrysoulakis Organics	
Analytical Study of the Internal Structure and the State of Fossilization of Skeletal Remains from the Site of Pikermi (Attica, Greece)	611
E. T. Stathopoulou, G. E. Theodorou and V. Pscharis Organic Residues from the Late Neolithic Makriyalos Cooking Pots	619
D. Urem-Kotsou, K. Kotsakis, C.W. Beck and E.G. Stout Development of Fast Derivatisation Procedures for the Chemical Investigation of Organic Residues in Early Byzantine Transport Containers from Ephesus/Turkey	631
R. Linke, S. Stanek, S. Lochner-Metaxas and E. Rosenberg	
Conservation	
A Comparative Study of Degradation Patterns of Petrified Material from Greek Fossilized Forests	639
V. Lampropoulos, G. Panagiaris, A. Karampotsos and E. Velitzelos Study of Three Consolidants used in Sub - Fossilized Bones that are Going to be Exposed In Situ (in Outdoor Conditions)	651
G. Panagiaris, V. Lampropoulos, I. Kotsifakos, P. Pavlakis and M. Dermitzakis Analysis of the Orange-brown Patina on Marble Surfaces from the Olympieion in Comparison With a Similar Patina from the Propylaea, Acropolis	659
K. Polikreti, Y. Maniatis, Y. Doganis, A. Galanos and P. Valavanis Investigation of Microcracks in Marble from Mt. Pentelikon Dielectric Spectroscopy	667
D. Triantis, C. Anastasiadis, I. Stavrakas and F. Vallianatos The Bust of Lenin by Memos Makris: Forms of Corrosion and Conservation Work	671
D. Charalambous, A. Karampotsos and V. Lampropoulos	
Ancient Technology	
Temporary Wooden Bosses: New Remarks on Lifting Devices in the Ancient World	679
A. Nakassis The Structures of V-IV Century B.C. of the Nisyros and Pyrgousa Islands (Dodecanese): Building Techniques, Nature and Sourceland	685
F. Burragato, A. Cummi-Spiridione, M. Di Filippo and B. Toro	