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Abe, Yoshinari, Izumi Nakai, Kazumitsu Takahashi, Nozomu Kawai, and Sakuji Yoshimura. 2009. 'On-Site Analysis of Archaeological Artifacts Excavated from the Site on the Outcrop at Northwest Saqqara, Egypt, by Using a Newly Developed Portable Fluorescence Spectrometer and Diffractometer'. Analytical and Bioanalytical Chemistry 395 (7): 1987–96. https://doi.org/10.1007/s00216-009-3141-x.

Adriaens, Annemie. 2005. 'Non-Destructive Analysis and Testing of Museum Objects: An Overview of 5 Years of Research'. Spectrochimica Acta Part B: Atomic Spectroscopy 60 (12): 1503–16. https://doi.org/10.1016/j.sab.2005.10.006.

Alexander Bentley, R. 2006. 'Strontium Isotopes from the Earth to the Archaeological Skeleton: A Review'. Journal of Archaeological Method and Theory 13 (3): 135–87. https://doi.org/10.1007/s10816-006-9009-x.

'Archaeological and Anthropological Sciences.' n.d. 1 (3). http://link.springer.com/journal/12520/1/3/page/1.

'Archaeometry'. n.d. 49 (2). http://onlinelibrary.wiley.com.libproxy.ucl.ac.uk/doi/10.1111/arch.2007.49.issue-2/issuetoc;jsessionid=C29BB0DA1059927413EA82D1C17CC253.d03t04.

'———'. n.d. 50 (2). http://onlinelibrary.wiley.com.libproxy.ucl.ac.uk/doi/10.1111/arch.2008.50.issue-6/issuetoc.

'———'. n.d. 50 (6). http://onlinelibrary.wiley.com.libproxy.ucl.ac.uk/doi/10.1111/arch.2008.50.issue-6/issuetoc.

Arthur M. Sackler Colloquia of the National Academy of Sciences and National Academy of Sciences (U.S.). 2005. Scientific Examination of Art: Modern Techniques in Conservation and Analysis : National Academy of Sciences, Washington, D.C., March 19-21, 2003. Washington, D.C.: National Academies Press.

Artioli, Gilberto, and Ivana Angelini. 2010. Scientific Methods and Cultural Heritage: An Introduction to the Application of Materials Science to Archaeometry and Conservation Science. Oxford: Oxford University Press. http://UCL.eblib.com/patron/FullRecord.aspx?p=618614.

Baxter, M. J. 1994. Exploratory Multivariate Analysis in Archaeology. Edinburgh: Edinburgh

University Press. https://www.jstor.org/stable/j.ctv2sx9gfb.

———. 2003. Statistics in Archaeology. Vol. Arnold applications of statistics. London: Arnold.

Baxter, M. J., and C. E. Buck. 2000. 'Data Handling and Statistical Analysis'. In Modern Analytical Methods in Art and Archaeology, Chemical analysis:681–746. New York: Wiley. https://contentstore.cla.co.uk/secure/link?id=5381c5cf-6c15-e811-80cd-005056af4099.

BAXTER, M. J., and I. C. FREESTONE. 2006. 'LOG-RATIO COMPOSITIONAL DATA ANALYSIS IN ARCHAEOMETRY*'. Archaeometry 48 (3): 511–31. https://doi.org/10.1111/j.1475-4754.2006.00270.x.

Ben-David, Merav, and Elizabeth A. Flaherty. 2012. 'Stable Isotopes in Mammalian Research: A Beginner's Guide'. Journal of Mammalogy 93 (2): 312–28. https://doi.org/10.1644/11-MAMM-S-166.1.

Bowman, Sheridan. 1991. Science and the Past. London: British Museum Press.

Brothwell, Don R., and A. M. Pollard. 2001a. Handbook of Archaeological Sciences. Chichester: John Wiley.

———. 2001b. Handbook of Archaeological Sciences. Chichester: John Wiley.

Chaplin, Tracey D., Robin J.H. Clark, and Marcos MartinÃ3n-Torres. 2010. 'A Combined Raman Microscopy, XRF and SEM-EDX Study of Three Valuable Objects - A Large Painted Leather Screen and Two Illuminated Title Pages in 17th Century Books of Ordinances of the Worshipful Company of Barbers, London'. Journal of Molecular Structure 976 (1–3): 350–59. https://doi.org/10.1016/j.molstruc.2010.03.042.

Charalambous, Andreas, Vasiliki Kassianidou, and George Papasavvas. 2014. 'A Compositional Study of Cypriot Bronzes Dating to the Early Iron Age Using Portable X-Ray Fluorescence Spectrometry (pXRF)'. Journal of Archaeological Science 46 (June): 205–16. https://doi.org/10.1016/j.jas.2014.03.006.

Charlton, M. F., E. Blakelock, and M. Martinon-Torres. 2012. 'Investigating the Production Provenance of Iron Artifacts with Multivariate Methods'. Journal of Archaeological Science 39 (7): 2280–93. http://discovery.ucl.ac.uk/1375923/1/1375923.pdf.

Chippindale, C. 2006. 'Colleagues, Talking, Writing, Publishing'. In Handbook of Archaeological Methods, 2:1339–71. Lanham, Md: Altamira Press. https://contentstore.cla.co.uk/secure/link?id=d9c1e291-e30c-e811-80cd-005056af4099.

Ciliberto, E., and G. Spoto. 2000. Modern Analytical Methods in Art and Archaeology. Vol. Chemical analysis. New York: Wiley.

Colombo, C., S. Bracci, C. Conti, M. Greco, and M. Realini. 2011. 'Non-Invasive Approach in the Study of Polychrome Terracotta Sculptures: Employment of the Portable XRF to Investigate Complex Stratigraphy'. X-Ray Spectrometry 40 (4): 273–79. https://doi.org/10.1002/xrs.1336.

Contrey, R.M, M Goodman-Elgar, N Bettencourt, A Seyfarth, A Van Hoose, and J.A Wolff. 2014. 'Calibration of a Portable X-Ray Fluorescence Spectrometer in the Analysis of Archaeological Samples Using Influence Coefficients'. Geochemistry: Exploration, Environment, Analysis 14 (3). http://geea.lyellcollection.org.libproxy.ucl.ac.uk/content/14/3/291.full.pdf.

Cotte, Marine, Paul Dumas, Yoko Taniguchi, Emilie Checroun, Philippe Walter, and Jean Susini. 2009. 'Recent Applications and Current Trends in Cultural Heritage Science Using Synchrotron-Based Fourier Transform Infrared Micro-Spectroscopy'. Comptes Rendus Physique 10 (7): 590–600. https://doi.org/10.1016/j.crhy.2009.03.016.

De Atley, S.P., and R.L. Bishop. 1991. 'Toward an Integrated Interface for Archaeology and Archaeometry'. In The Ceramic Legacy of Anna O. Shepard, 358–81. Niwot, Colo: University Press of Colorado. https://contentstore.cla.co.uk/secure/link?id=724ac537-6915-e811-80cd-005056af4099.

De Benedetto, G.E., R. Laviano, L. Sabbatini, and P.G. Zambonin. 2002. 'Infrared Spectroscopy in the Mineralogical Characterization of Ancient Pottery'. Journal of Cultural Heritage 3 (3): 177–86. https://doi.org/10.1016/S1296-2074(02)01178-0.

Degryse, Patrick. 2013. 'Isotope-Ratio Techniques in Glass Studies'. In Modern Methods for Analysing Archaeological and Historical Glass, edited by Koen Janssens, 235–45. Oxford, UK: John Wiley & Sons Ltd. https://doi.org/10.1002/9781118314234.ch10.

Degryse, Patrick, Julian Henderson, and Gregory Hodgins. 2009. Isotopes in Vitreous Materials. Vol. Studies in archaeological sciences. Leuven, Belgium: Leuven University Press. https://www.jstor.org/stable/j.ctt9qdx40.

Demortier, G., A. Adriaens, European Cooperation in the Field of Scientific and Technical Research (Organization). COST G1 (Project), and European Commission. Directorate General for Research. 2000. Ion Beam Study of Art and Archaeological Objects. Vol. EUR. Luxembourg: Office for Official Publications of the European Communities.

Derrick, Michele R., Dusan C. Stulik, and James M. Landry. 1999. Infrared Spectroscopy in Conservation Science - Infrared Spectroscopy. Los Angeles: Getty Conservation Institute. http://www.getty.edu/publications/virtuallibrary/0892364696.html.

Dran, Jean-Claude, Joseph Salomon, Thomas Calligaro, and Philippe Walter. 2004. 'Ion Beam Analysis of Art Works: 14 Years of Use in the Louvre'. Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms 219–220 (June): 7–15. https://doi.org/10.1016/j.nimb.2004.01.019.

Drennan, Robert D. 2009. Statistics for Archaeologists: A Commonsense Approach. 2nd ed. Vol. Interdisciplinary contributions to archaeology. New York: Springer. http://dx.doi.org/10.1007/978-1-4419-0413-3.

Dungworth, D, and B Girbal. 2011. 'Walmer Castle, Deal, Kent: Analysis of Window Glass'. English Heritage Research Department Report Series 2011 (2). http://archaeologydataservice.ac.uk/archives/view/greylit/details.cfm?id=11363.

Dussubieux, Laure, and Heather Walder. 2015. 'Identifying American Native and European

Smelted Coppers with pXRF: A Case Study of Artifacts from the Upper Great Lakes Region'. Journal of Archaeological Science 59 (July): 169–78. https://doi.org/10.1016/j.jas.2015.04.011.

Edwards, Howell G. M., John M. Chalmers, and Royal Society of Chemistry (Great Britain). 2005. Raman Spectroscopy in Archaeology and Art History. Vol. RSC analytical spectroscopy monographs. Cambridge: Royal Society of Chemistry.

Eiland, M.L., and Q. Williams. 2001. 'Investigation of Islamic Ceramics from Tell Tuneinir Using X-Ray Diffraction'. Geoarchaeology 16 (8): 875–903. https://doi.org/10.1002/gea.1025.

Eliyahu-Behar, Adi, Sana Shilstein, Noa Raban-Gerstel, Yuval Goren, Ayelet Gilboa, Ilan Sharon, and Steve Weiner. 2008. 'An Integrated Approach to Reconstructing Primary Activities from Pit Deposits: Iron Smithing and Other Activities at Tel Dor under Neo-Assyrian Domination'. Journal of Archaeological Science 35 (11): 2895–2908. https://doi.org/10.1016/j.jas.2008.06.004.

Fletcher, Mike, and G. R. Lock. 1991. Digging Numbers: Elementary Statistics for Archaeologists. Vol. Monograph / Oxford University Committee for Archaeology. Oxford: Oxford University Committee for Archaeology.

Forster, Nicola, Peter Grave, Nancy Vickery, and Lisa Kealhofer. 2011. 'Non-Destructive Analysis Using PXRF: Methodology and Application to Archaeological Ceramics'. X-Ray Spectrometry 40 (5): 389–98. https://doi.org/10.1002/xrs.1360.

Frahm, E. 2013. 'Silo Science and Portable XRF in Archaeology: A Response to Speakman and Shackley'. Journal of Archaeological Science 40 (2): 1435–43. https://doi.org/10.1016/j.jas.2012.09.033.

Frahm, Ellery. 2013a. 'Is Obsidian Sourcing about Geochemistry or Archaeology? A Reply to Speakman and Shackley'. Journal of Archaeological Science 40 (2): 1444–48. https://doi.org/10.1016/j.jas.2012.10.001.

———. 2013b. 'Validity of "off-the-Shelf" Handheld Portable XRF for Sourcing Near Eastern Obsidian Chip Debris'. Journal of Archaeological Science 40 (2): 1080–92. https://doi.org/10.1016/j.jas.2012.06.038.

Frahm, Ellery, and Roger C.P. Doonan. 2013. 'The Technological versus Methodological Revolution of Portable XRF in Archaeology'. Journal of Archaeological Science 40 (2): 1425–34. https://doi.org/10.1016/j.jas.2012.10.013.

Freestone, I. C., K. A. Leslie, M. Thirlwall, and Y. Gorin-Rosen. 2003. 'Strontium Isotopes in the Investigation of Early Glass Production: Byzantine and Early Islamic Glass from the Near East*'. Archaeometry 45 (1): 19–32. https://doi.org/10.1111/1475-4754.00094.

Freestone, I.C, and A.P Middleton. 1987. 'Mineralogical Applications of the Analytical SEM in Archaeology'. Mineralogical Magazine 51: 21–31. http://www.minersoc.org/pages/Archive-MM/Volume_51/51-359-21.pdf.

Gauss, Roland K., J. BÃitora, Erich Nowaczinski, Knut Rassmann, and Gerd Schukraft. 2013.

'The Early Bronze Age Settlement of Fidvár, Vráble (Slovakia): Reconstructing Prehistoric Settlement Patterns Using Portable XRF'. Journal of Archaeological Science 40 (7): 2942–60. https://doi.org/10.1016/j.jas.2013.01.029.

Giumlia-Mair, A., C. Albertson, G. Boschian, G. Giachi, P. Iacomussi, P. Pallecchi, G. Rossi, A. N. Shugar, and S. Stock. 2010. 'Surface Characterisation Techniques in the Study and Conservation of Art and Archaeological Artefacts: A Review'. Materials Technology 25 (5): 245–61. https://doi.org/10.1179/175355510X12850784228001.

Goffer, Zvi. 2007. Archaeological Chemistry. 2nd ed. Hoboken, N.J.: Wiley.

Goren, Yuval, Hans Mommsen, and JÃ¶rg Klinger. 2011. 'Non-Destructive Provenance Study of Cuneiform Tablets Using Portable X-Ray Fluorescence (pXRF)'. Journal of Archaeological Science 38 (3): 684–96. https://doi.org/10.1016/j.jas.2010.10.020.

Grave, Peter, Val Attenbrow, Lin Sutherland, Ross Pogson, and Nicola Forster. 2012. 'Non-Destructive pXRF of Mafic Stone Tools'. Journal of Archaeological Science 39 (6): 1674–86. https://doi.org/10.1016/j.jas.2011.11.011.

Hamilton, E. 2004. 'The Four Scales of Technical Analysis; or 'how to Make Archaeometry More Useful'. In Exploring the Role of Analytical Scale in Archaeological Interpretation, BAR international series:45–48. Oxford: Archaeopress. https://contentstore.cla.co.uk/secure/link?id=1dfefd87-db0c-e811-80cd-005056af4099.

Hancock, R.G.V. 2000. 'Elemental Analysis'. In Modern Analytical Methods in Art and Archaeology, Chemical analysis:11–20. New York: Wiley.

HAUSTEIN, M., C. GILLIS, and E. PERNICKA. 2010. 'TIN ISOTOPY-A NEW METHOD FOR SOLVING OLD QUESTIONS'. Archaeometry 52 (5): 816–32. https://doi.org/10.1111/j.1475-4754.2010.00515.x.

Heginbotham, A, A Bezur, M Bouchard, J.M Davis, K Eremin, J.H Frantz, L Glinsman, et al. 2010. 'An Evaluation of Inter-Laboratory Reproducibility for Quantitative XRF of Historic Copper Alloys'. In In Metal 2010. Proceedings of the International Conference on Metal Conservation, Charleston, South Carolina, USA, October 11-15, 2010, edited by P Mardikian, C Chemello, C Watters, and P Hull, 178–88. Clemson University. http://www.getty.edu/museum/pdfs/heginbotham_metal2010_submitted2.pdf.

Hein, A., A. Tsolakidou, I. Iliopoulos, H. Mommsen, J. Buxeda i GarrigÃ3s, G. Montana, and V. Kilikoglou. 2002. 'Standardisation of Elemental Analytical Techniques Applied to Provenance Studies of Archaeological Ceramics: An Inter Laboratory Calibration Study'. The Analyst 127 (4): 542–53. https://doi.org/10.1039/b109603f.

Henderson, Julian. 1989. Scientific Analysis in Archaeology and Its Interpretation. Vol. UCLA Institute of Archaeology, archaeological research tools. Oxford: Oxford University Committee for Archaeology, Institute of Archaeology.

———. 2000. The Science and Archaeology of Materials: An Investigation of Inorganic Materials. London: Routledge. https://ebookcentral.proquest.com/lib/UCL/detail.action?docID=1144554&pq-origsite=primo.

Hunt, Alice M.W., and Robert J. Speakman. 2015. 'Portable XRF Analysis of Archaeological Sediments and Ceramics'. Journal of Archaeological Science 53 (January): 626–38. https://doi.org/10.1016/j.jas.2014.11.031.

Ingo, G.M., S. Balbi, T. de Caro, I. Fragalà, E. Angelini, and G. Bultrini. 2006. 'Combined Use of SEM-EDS, OM and XRD for the Characterization of Corrosion Products Grown on Silver Roman Coins'. Applied Physics A 83 (4): 493–97. https://doi.org/10.1007/s00339-006-3533-0.

Janssens, Koen H. A. 2011. Modern Methods for Analysing Archaeological and Historical Glass. Chichester, West Sussex, United Kingdom: John Wiley & Sons Inc. http://dx.doi.org/10.1002/9781118314234.

Janssens, Koen H. A., and R. van Grieken. 2004. Non-Destructive Microanalysis of Cultural Heritage Materials. Vol. Comprehensive analytical chemistry. Amsterdam, London: Elsevier.

Jones, A. 2004. 'Archaeometry and Materiality: Materials-Based Analysis in Theory and Practice*'. Archaeometry 46 (3): 327–38. https://doi.org/10.1111/j.1475-4754.2004.00161.x.

Jones, Andrew. 2001. Archaeological Theory and Scientific Practice. Vol. Topics in contemporary archaeology. Cambridge: Cambridge University Press. https://doi.org/https://doi.org/10.1017/CBO9780511606069.

Kearns, T, M Martinón-Torres, and Th Rehren. 2010. 'Metal to Mould: Alloy Identification in Experimental Casting Moulds Using XRF'. Historical Metallurgy: Journal of the Historical Metallurgy Society 44 (1): 48–58.

Killick, David. 1997. 'Archaeology and Archaeometry: From Casual Dating to a Meaningful Relationship?' Antiquity 71 (273): 518–24. http://search.proquest.com/docview/217552149?accountid=14511.

———. 2015. 'The Awkward Adolescence of Archaeological Science'. Journal of Archaeological Science 56 (April): 242–47. https://doi.org/10.1016/j.jas.2015.01.010.

Kovacs, Robert, Sandra Schlosser, Samuel Philipp Staub, Alexander Schmiderer, Ernst Pernicka, and Detlef GÃ¼nther. 2009. 'Characterization of Calibration Materials for Trace Element Analysis and Fingerprint Studies of Gold Using LA-ICP-MS'. Journal of Analytical Atomic Spectrometry 24 (4). https://doi.org/10.1039/b819685k.

Lambert, Joseph B. 1997. Traces of the Past: Unraveling the Secrets of Archaeology through Chemistry. Vol. Helix books. Reading, Mass: Addison-Wesley.

LEE-THORP, J. A. 2008. 'ON ISOTOPES AND OLD BONES*'. Archaeometry 50 (6): 925–50. https://doi.org/10.1111/j.1475-4754.2008.00441.x.

Liu, S., Q.H. Li, F. Gan, P. Zhang, and J.W. Lankton. 2012. 'Silk Road Glass in Xinjiang, China: Chemical Compositional Analysis and Interpretation Using a High-Resolution Portable XRF Spectrometer'. Journal of Archaeological Science 39 (7): 2128–42. https://doi.org/10.1016/j.jas.2012.02.035.

Martini, Marco, Mario Milazzo, Marcello Piacentini, Società italiana di fisica, and International School of Physics 'Enrico Fermi'. 2004. Physics Methods in Archaeometry. Vol. Proceedings of the International School of Physics 'Enrico Fermi'. Amsterdam: IOS Press.

Martinón-Torres, M. 2008. 'Why Should Archaeologists Take History and Science Seriously?' In Archaeology, History and Science: Integrating Approaches to Ancient Materials, Publications of the Institute of Archaeology, University College London:15–36. Walnut Creek, CA: Left Coast Press. http://ls-tlss.ucl.ac.uk/course-materials/ARCLG107_45457.pdf.

Martinón-Torres, M, and D.C Killic. 2015. 'Archaeological Theories and Archaeological Sciences'. In The Oxford Handbook of Archaeological Theory, edited by Andrew Gardner, Mark Lake, and Ulrike Sommer. http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199567942.001.0001/oxfordhb-9780199567942-e-004?rskey=F3hTAd&result=1.

Martinón-Torres, Marcos, Xiuzhen Janice Li, Andrew Bevan, Yin Xia, Kun Zhao, and Thilo Rehren. 2014. 'Forty Thousand Arms for a Single Emperor: From Chemical Data to the Labor Organization Behind the Bronze Arrows of the Terracotta Army'. Journal of Archaeological Method and Theory 21 (3): 534–62. https://doi.org/10.1007/s10816-012-9158-z.

Martinón-Torres, Marcos, and Thilo Rehren. 2008. Archaeology, History and Science: Integrating Approaches to Ancient Materials. Vol. Publications of the Institute of Archaeology, University College London. Walnut Creek, CA: Left Coast Press.

Martinón-Torres, Marcos, and María Alicia Uribe-Villegas. 2015a. 'The Prehistoric Individual, Connoisseurship and Archaeological Science: The Muisca Goldwork of Colombia'. Journal of Archaeological Science 63 (November): 136–55. https://doi.org/10.1016/j.jas.2015.08.014.

———. 2015b. 'The Prehistoric Individual, Connoisseurship and Archaeological Science: The Muisca Goldwork of Colombia'. Journal of Archaeological Science 63 (November): 136–55. https://doi.org/10.1016/j.jas.2015.08.014.

Martinón-Torres, Marcos, Roberto ValcÃircel Rojas, Juanita SÃienz Samper, and MarÃ-a Filomena Guerra. 2012. 'Metallic Encounters in Cuba: The Technology, Exchange and Meaning of Metals before and after Columbus'. Journal of Anthropological Archaeology 31 (4): 439–54. https://doi.org/10.1016/j.jaa.2012.03.006.

Milić, Marina. 2014. 'PXRF Characterisation of Obsidian from Central Anatolia, the Aegean and Central Europe'. Journal of Archaeological Science 41 (January): 285–96. https://doi.org/10.1016/j.jas.2013.08.002.

Moreau, Jean-François. 2009. Proceedings: ISA 2006 : 36th International Symposium on Archaeometry : 2-6 May 2006, Quebec City, Canada. Vol. Cahiers d'archéologie du CELAT. Série archéométrie. Québec: CELAT, Université Laval.

Nazaroff, Adam J., Keith M. Prufer, and Brandon L. Drake. 2010. 'Assessing the Applicability of Portable X-Ray Fluorescence Spectrometry for Obsidian Provenance Research in the Maya Lowlands'. Journal of Archaeological Science 37 (4): 885–95.

https://doi.org/10.1016/j.jas.2009.11.019.

Nesse, William D. 2004. Introduction to Optical Mineralogy. 3rd ed. New York: Oxford University Press.

Nicholas, M, and P Manti. 15AD. 'Testing the Applicability of Handheld Portable XRF to the Characterisation of Archaeological Copper Alloys'. In ICOM-CC 17th Triennial Conference Preprints, Melbourne, edited by J Bridgland. Paris: International Council of Museums. http://orca.cf.ac.uk/65469/.

Ogburn, Dennis, Bill Sillar, and Julio CÃ©sar Sierra. 2013. 'Evaluating Effects of Chemical Weathering and Surface Contamination on the in Situ Provenance Analysis of Building Stones in the Cuzco Region of Peru with Portable XRF'. Journal of Archaeological Science 40 (4): 1823–37. https://doi.org/10.1016/j.jas.2012.09.023.

Olsen, Sandra L. 1988. Scanning Electron Microscopy in Archaeology. Vol. BAR international series. Oxford: B.A.R. https://doi.org/https://doi.org/10.30861/9780860545798.

Orfanou, V., and Th. Rehren. 2015. 'A (Not so) Dangerous Method: pXRF vs. EPMA-WDS Analyses of Copper-Based Artefacts'. Archaeological and Anthropological Sciences 7 (3): 387–97. https://doi.org/10.1007/s12520-014-0198-z.

Orton, Clive. 1980. Mathematics in Archaeology. Vol. Collins archaeology. London: Collins.

Orton, Clive. 2000. Sampling in Archaeology. Vol. Cambridge manuals in archaeology. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9781139163996.

Parkes, P. A. 1986. Current Scientific Techniques in Archaeology. London: Croom Helm.

Pérez-Arantegui, J., ed. 2006. 'Proceedings of the 34th International Symposium on Archaeometry'. 2006. http://ifc.dpz.es/publicaciones/ebooks/id/2610.

Pollard, A. M., Catherine Batt, Suzanne Young, and Ben Stern. 2007. Analytical Chemistry in Archaeology. Cambridge: Cambridge University Press.

Pollard, A. M., Carl Heron, Royal Society of Chemistry (Great Britain), and R.A. Armitage. 2017. Archaeological Chemistry. Cambridge: Royal Society of Chemistry.

Potts, Philip J., Olwen Williams-Thorpe, and Peter C. Webb. 1997. 'The Bulk Analysis of Silicate Rocks by Portable X-Ray Fluorescence: Effect of Sample Mineralogy in Relation to the Size of the Excited Volume'. Geostandards and Geoanalytical Research 21 (1): 29–41. https://doi.org/10.1111/j.1751-908X.1997.tb00529.x.

Rehren, T. 2001. 'Qantir-Piramesses and the Organisation of the Egyptian Glass Industry'. In The Social Context of Technological Change: Egypt and the Near East, 1650-1550 B.C. : Proceedings of a Conference Held at St Edmund Hall, Oxford, 12-14 September 2000, 223–138. Oxford: Oxbow. https://contentstore.cla.co.uk/secure/link?id=eadf6446-d60c-e811-80cd-005056af4099.

Ricciardi, Paola, Philippe Colomban, Aurélie Tournié, Michele Macchiarola, and Naceur Ayed. 2009. 'A Non-Invasive Study of Roman Age Mosaic Glass Tesserae by Means of Raman Spectroscopy'. Journal of Archaeological Science 36 (11): 2551–59. https://doi.org/10.1016/j.jas.2009.07.008.

Sand-Jensen, Kaj. 2007. 'How to Write Consistently Boring Scientific Literature'. Oikos 116 (5): 723–27. https://doi.org/10.1111/j.0030-1299.2007.15674.x.

Sax, Margaret, Jane M. Walsh, Ian C. Freestone, Andrew H. Rankin, and Nigel D. Meeks. 2008. 'The Origins of Two Purportedly Pre-Columbian Mexican Crystal Skulls'. Journal of Archaeological Science 35 (10): 2751–60. https://doi.org/10.1016/j.jas.2008.05.007.

Scott, R.B., K. Eekelers, L. Fredericks, and P. Degryse. 2015. 'A Methodology for Qualitative Archaeometallurgical Fieldwork Using a Handheld X-Ray Fluorescence Spectrometer'. STAR: Science & Technology of Archaeological Research 1 (2): 70–80. https://doi.org/10.1080/20548923.2016.1183941.

Scott, Rebecca B., Kim Eekelers, and Patrick Degryse. 2016. 'Quantitative Chemical Analysis of Archaeological Slag Material Using Handheld X-Ray Fluorescence Spectrometry'. Applied Spectroscopy 70 (1): 94–109. https://doi.org/10.1177/0003702815616741.

Shackley, M. 2010. 'Is There Reliability and Validity in Portable X-Ray Fluorescence Spectrometry (XRF)?' SAA Archaeological Record, 17–20.

———. 2011a. 'An Introduction to X-Ray Fluorescence (XRF) Analysis in Archaeology'. In X-Ray Fluorescence Spectrometry (XRF) in Geoarchaeology, 7–44. New York: Springer. https://doi.org/10.1007/978-1-4419-6886-9_2.

———. 2011b. 'An Introduction to X-Ray Fluorescence (XRF) Analysis in Archaeology'. In X-Ray Fluorescence Spectrometry (XRF) in Geoarchaeology, 7–44. New York: Springer. https://doi.org/10.1007/978-1-4419-6886-9_2.

Shackley, M. Steven. 2011. 'An Introduction to X-Ray Fluorescence (XRF) Analysis in Archaeology'. In X-Ray Fluorescence Spectrometry (XRF) in Geoarchaeology, edited by M. Steven Shackley, 7–44. New York, NY: Springer New York. https://doi.org/10.1007/978-1-4419-6886-9_2.

Shackley, M.S. 2012. 'Portable X-Ray Fluorescence Spectrometry (pXRF): The Good, the Bad, and the Ugly'. Archaeology Southwest Magazine 26 (2). http://www.archaeologysouthwest.org/pdf/pXRF_essay_shackley.pdf.

Shennan, Stephen. 1997. Quantifying Archaeology. 2nd ed. Iowa City: University of Iowa Press. https://www.jstor.org/stable/10.3366/j.ctvxcrtz3.

Shugar, Aaron N., and Jennifer L. Mass. 2012. Handheld XRF for Art and Archaeology. Vol. Studies in archaeological sciences. Leuven: Leuven University Press. https://www.jstor.org/stable/j.ctt9qdzfs.

Shugar, A.N. 2013. 'Portable X-Ray Fluorescence and Archaeology: Limitations of the Instrument and Suggested Methods To Achieve Desired Results'. In Archaeological

Chemistry VIII, edited by Ruth Ann Armitage and James H. Burton, ACS symposium series:173–89. Washington, DC: American Chemical Society.

Sillar, B., and M. S. Tite. 2000. 'The Challenge of "Technological Choices" for Materials Science Approaches in Archaeology'. Archaeometry 42 (1): 2–20. https://doi.org/10.1111/j.1475-4754.2000.tb00863.x.

Speakman, Robert J., Nicole C. Little, Darrell Creel, Myles R. Miller, and Javier G. Inanez. 2011. 'Sourcing Ceramics with Portable XRF Spectrometers? A Comparison with INAA Using Mimbres Pottery from the American Southwest'. Journal of Archaeological Science 38 (12): 3483–96. https://doi.org/10.1016/j.jas.2011.08.011.

Tite, M. S. 2001. 'Overview - Materials Study in Archaeology'. In Handbook of Archaeological Sciences, 443–48. Chichester: John Wiley. https://contentstore.cla.co.uk/secure/link?id=db56c214-7a15-e811-80cd-005056af4099.

Tite, Michael S. 2002. 'Archaeological Collections: Invasive Sampling versus Object Integrity'. Papers from the Institute of Archaeology 13 (November). https://doi.org/10.5334/pia.189.

Torrence, R, Th Rehren, and M Martinon-Torres. 2015. 'Scoping the Future of Archaeological Science: Papers in Honour of Richard Klein'. Journal of Archaeological Science 56. http://www.sciencedirect.com/science/journal/03054403/56.

Tubb, Kathryn Walker. 2007. 'Irreconcilable Differences? Problems with Unprovenanced Antiquities'. Papers from the Institute of Archaeology 18 (November). https://doi.org/10.5334/pia.294.

Tykot, Robert H. 2016. 'Using Nondestructive Portable X-Ray Fluorescence Spectrometers on Stone, Ceramics, Metals, and Other Materials in Museums: Advantages and Limitations'. Applied Spectroscopy 70 (1): 42–56. https://doi.org/10.1177/0003702815616745.

Uda, M., G. Demortier, I. Nakai, and International Symposium on X-ray Archaeometry. 2005. X-Rays for Archaeology. Dordrecht: Springer. https://link.springer.com/book/10.1007/1-4020-3581-0.

White, P. 2006. 'Producing the Record'. In Archaeology in Practice: A Student Guide to Archaeological Analyses, 410–25. Malden, MA: Blackwell. https://contentstore.cla.co.uk/secure/link?id=0e7f700a-df0c-e811-80cd-005056af4099.

Young, M. L., F. Casadio, S. Schnepp, E. Pearlstein, J. D. Almer, and D. R. Haeffner. 2010. 'Non-Invasive Characterization of Manufacturing Techniques and Corrosion of Ancient Chinese Bronzes and a Later Replica Using Synchrotron X-Ray Diffraction'. Applied Physics A 100 (3): 635–46. https://doi.org/10.1007/s00339-010-5646-8.