Book reviews and other Matters

Book reviews

- Joris Dik
  *Scientific Analysis of Historical Paint and the Implications for Art History and Art Conservation**
  The Case Studies of Naples Yellow and Discoloured Smalt
  (Amsterdam, 2003), 159 pp. b.& w. and colour figs., University of Amsterdam.
  NUR 647,911; ISBN 90–9016479–0

Over the past decades a new field of art historical research known as 'technical art history' has evolved. Conventional art history has long been dominated by questions of theory, iconography, style or attribution. In technical art history, questions address the material aspects of the works of art, and the techniques used. One of the most intriguing questions in technical art history (hitherto largely unanswered) concerns the sudden disappearance of lead-tin yellow from the painter's palette. Around the 1720s lead-tin yellow was completely replaced by Naples yellow. There are no obvious reasons for this sudden change as no specific improvements of working properties were brought about. Lead antimonate did not give a better yellow colour than the stannate. In fact, it was the other way round as, compared to a good intense lead-tin yellow, antimony-based products tend to be slightly paler and duller. There was also no shortage of raw materials. Tin was as easily available in the eighteenth century as in the seventeenth, nor do we know of very significant differences in price for the two metals. Why then did this change come about?

Joris Dik started to investigate the eighteenth century texts that describe the making of lead antimonates. In chapter 2 he surveys the Italian recipes for lead antimonates; in chapter 3 he discusses their production in Northern Europe. The earliest documentary evidence for this type of yellow pigment (descriptions in the treatises by Biringuccio and Picolpasso, or in the Darduin manuscript, refer to products for the glass or ceramics industry, not pigments) was found in the sixteenth century Mariani manuscript. This treatise describes three lead-based yellows: *giallolino*, i.e. the conventional lead-tin yellow, and two versions of *giallo de' vasari*, potters' yellow, both based on oxides of lead and antimony. The problems begin with a recipe for one of the latter two. It calls for the ingredients that would make up for a regular lead antimonite, but it also mentions the addition of *tuccia* or *tutia*. Tutia is usually translated as zinc oxide, but ancient texts indicate that there are several types of this mysterious substance, including tin oxide. Dik made two reconstructions one with zinc oxide, and one with tin oxide. Both mixtures resulted in isostructural yellow compounds of pyrochlore structure with cell parameters of about 10.60 –. Further evidence was found that the *tuccia* in Mariani's manuscript was most likely a tin oxide. The Mariani recipe therefore seems to correspond with a recently discovered ternary lead-tin-antimony oxide.[1] Dik also convincingly demonstrates that the production of the pigment remained closely linked with the ceramics industry. The results of his reconstructions were characterised by conventional crystallographic techniques (described in chapter 1) such as x-ray diffraction with Gandolfi and Guinier cameras, and with larger-area instruments like the X'Pert diffractometer. The availability of fine-tuned synchrotron radiations at the appropriate beam lines of the ESRF facility in Grenoble, however, proved to be the most rewarding. This range of techniques yielded a number of well-defined patterns that are reproduced in graphs and tables in the appendices of the chapter.

The same array of instrumentation was put to use in chapter 3 for the investigation of Northern European lead antimonates. The most important literary source for Naples yellow appeared to be the late eighteenth century text of the academician Fougeroux de Bondaroy. He travelled to Naples and was the first (in 1769) to come back to France with a recipe for a pigment, which until then had been believed to be a natural product. In this chapter, too, there are many useful tables with diffraction patterns of the various compounds that resulted from the reconstructions. This makes the book not simply an interesting read on a peculiar topic in the history of technology. It may also serve as a very useful reference for the analyst in his lab who needs to define this strange yellow stuff found in a painting. As such it is a very useful complement to Wainwright's text on the antimonates and Kühn's seminal article on the stannates.[2]

Rietveld refinement techniques were used in chapter 4 for the re-examination of Naples yellow samples from a number of well-respected historical nineteenth century reference collections. These yellows turned out to be quite diverse. Many different phases were found. Not nearly the homogeneous, monolithic whole that the uninitiated would expect. This diversity, however, appeared to be in line with the great number of different recipes at that time for the production of these substances. Analyses with electron diffraction in the TEM, added to the other diffraction methods, revealed the existence of a new phase of lead antimonate.

Chapter 5 is aimed at locating the geographical origin of lead antimonate paint samples. The geographical origin of the lead used to make the Naples yellow may be pinpointed more precisely by the study of lead isotope ratios. Lead occurs in nature as a combination of four stable isotopes having different masses. These stable isotopes constitute lead compounds in different ratios depending on their original geological deposit. The ratio of these lead isotopes is thus indicative of the source of the lead. The study of lead isotopes is increasingly significant for the forensic sciences. For art historical studies the hope is that these ratios will also indicate the origins of pigments such as lead white, lead-tin yellow, red lead and lead chromate. Study of lead compounds on the basis of geographical and geological characteristics requires large databases with the isotope-signatures of historic mines.

The isotope analysis of a small number of Naples yellows nicely demonstrated the possibilities and limitations of this elegant technique. It would have been nice if a larger number of samples could have been subjected to this type of investigation. As each new isotope analysis contributes to the existing body of knowledge, it is very important that paintings researchers make a point of publishing their isotope data. Analysis of isotope ratios is a technique with great possibilities.

On page 58 of the book, the author addresses the intriguing question of the sudden disappearance of lead-tin yellow from the painter's palette and its replacement with Naples yellow. Dik explains this change primarily as the result of an eighteenth century fascination with the exotic, and admiration in the North for Italian painting.

There may be some truth to this assumption, but it seems more likely that this had everything to do with a change already visible in the seventeenth century in the production methods of pigments. No recipes for the making of lead-tin yellow as a painter's pigment existed in the seventeenth century, as there was no need for them. It was produced as a by-product in the ceramics industry, for which it was not worth making notes. By the time that Naples yellow appeared on the palette and the recipes for its production were widely published, the production of pigments had become a separate industry in its own right.

The last chapter of the book deals with an entirely different pigment, with different questions and different analytical techniques. It discusses the digital reconstruction of discoloured smalt-containing paint on a seventeenth century Dutch painting. Smalt is a cobalt-coloured potassium-enriched glass that is ground to a fine blue pigment powder. This pigment often shows signs of severe discoloration. The blue-grey drapery on a painting by Ter Brugghen showed a mottled appearance that could be associated with smalt discoloration. There was every chance that this grey was originally a bright and powerful blue. But how blue? Neutron autoradiography made it possible to study the extent of the smalt distribution over the painted surface. When a passage of painting is done in smalt it will be possible to make this visible on the basis of the cobalt that is always present in that pigment, or on the basis of arsenic that is often present. In neutron autoradiography, a photographic film is blackened by the radiation from the paints of an activated painting. The intensity and duration of this radiation is dependent on the halftimes of the various elements in the paints. By making use of these halftimes the differently pigmented layers can be made visible on separate films.

To activate a painting it is exposed to a homogeneous thermal neutron flux. The elements are activated to form radioactive isotopes that decay to their original ground state under the emission of gamma and/or b radiation. The radiation emitted during decay is very specific to the radioisotope. This emission causes the blackening of the film. By exposing these films at different time slots after irradiation, distributions of different radionuclides can be imaged. In this way, paint distribution in various layers of the painting can be imaged. Because of its high cross section and relatively short half-life time, cobalt (^{60}Co), the colouring principle in smalt, is suitable for autoradiography. Arsenic (^{78}As), almost always present as remnant from the original cobalt ore, works even better. The autoradiograph provided an image of the distribution of the paint; reflectance spectrometry of a fresh and pure sample of smalt provided the right colour co-ordinates. The combined parameters allowed for a digital reconstruction of what the blue may originally have looked like. From these results the chapter concludes with interesting observations on seventeenth century aesthetic and about the undesirable pictorial effects that the decay of the pigment brings about.

Scientific Analysis of Historical Paint and the Implications for Art History and Art Conservation is a very useful book. Several lines of investigation are brought together in a logical, harmonious, and elegant way. As a natural scientist Joris Dik is his own art historian; as art historian he is his own scientist. In this book full advantage is taken of this multidisciplinary background.
It is to be hoped that this book will not only end up on the bookshelves of scientists, but that it will also find its way into the scholar's library.

Arie Wallert
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Notes

* Many of the chapters in this PhD-dissertation have appeared as articles in scientific periodicals like the Nature, *Archaeometry*, or the *Zeitschrift für Kunsttechnologie und Konservierung*.

1 A. Roy, B.H. Berrie, 'A new lead-based yellow in the seventeenth century', *Painting Techniques, History, Materials and Studio Practice*, contributions to the Dublin IIC Congress, 7–11 September 1998, (London, 1998), 160–165.

2 I. Wainwright, et al., 'Lead Antimonate Yellow', *Artists' Pigments: Handbook of their History and Characteristics*, vol. 1 (Washington, 1986), 219–254.

3 H. Kühn, 'Lead-Tin Yellow, *Artists' Pigments: A Handbook of their History and Characteristics*, vol. 2 (Washington, 1993), 83–112.

▸ Georgiana M. Languri

Molecular studies of Asphalt, Mummy and Kassel earth pigments*
Their characterisation, identification and effect on the drying of traditional oil paint
(Amsterdam, 2004), 192 pp. b.& w. figs.,
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Organic dark brown or black pigments like asphalt, Kassel earth, and mummy have a very bad reputation. Many of the defects observed in dark areas on paintings, in particular those from the nineteenth century, are generally attributed to these pigments. In discussions of the works of painters of The Hague School such as Jacob Maris and Joseph Israels, the issue of paint deterioration caused by these pigments recurs over and over again.

These pigments, particularly bitumen, have been considered so dangerous that paintings made with them may turn black, making the image completely unrecognisable. These effects cannot be reversed. In a study on The Hague School a critic, extremely pessimistic about the future of these paintings, wrote: 'Little will remain of the painted works of Joseph Israels. Especially the larger, thoroughly worked out oil paintings…there are several reasons for this decay of Israëls' work, but the most important one is the use of bitumen. It has two major drawbacks. First, a thickly applied bituminous underlayer will never fully dry and because of the movements of the paint layers cracks will occur…
The darkening of paint is in fact even worse than the occurrence of cracks, as it occurs in a gradual and imperceptible manner and it seems that nothing can be done against it.'[1]

In her study of asphalt, mummy and Kassel earth, Georgiana Languri has tried to discover whether this poor reputation is justified. By investigating the make-up of these pigments, she has tried to understand the mechanisms behind their bad effects.

A number of hurdles needed to be surmounted. In the analysis of these pigments, in samples from actual paintings, it proved extremely difficult to achieve an unambiguous positive identification. It was decided, therefore, that it would be more sensible to try to replicate the effects of these pigments on an oil paint in a simulated paint system, and in a controlled laboratory environment. Reconstructions of these paints for ageing experiments were made with pigments from the Hafkenscheid collection. This collection covers the product range of pigments, which were available to painters in the late eighteenth and early nineteenth centuries through the firm of Michiel Hafkenscheid. This collection represents a most appropriate source of contemporary material when making historically accurate reconstructions. But one needs to be sure that the material to be put to the test is absolutely reliable. However good an analyst may be, his analyses can only be as good as his standards. Can the Hafkenscheid material provide reliable standards? Is the pigment in that box really what its label says it is?

In chapter 2, Languri investigates asphalt from the Hafkenscheid collection and compares the results with a sample from a modern floating block of asphalt from the Dead Sea. Both samples could be characterised with various advanced mass spectrometric techniques as cross-linked flat sheets of polycyclic aromatic and heterocyclic hydrocarbons, dissolved in a mixture of lower molecular weight aliphatic and alicyclic hydrocarbons. The Hafkenscheid sample could indeed be identified as true asphalt. Furthermore, Languri could also demonstrate on the basis of isotope values that the Hafkenscheid sample probably had the same provenance, i.e. the Dead Sea. For the analysis of asphalt in a sample of unknown composition, the presence of hopanes (a.o. m/z 191) can be considered as good markers for identification. However, if paint manufacture involved roasting the pigment, many of the indicative biomarkers might have evaporated in the process. The cleaning of a painting with organic solvents may also lead to considerable loss of these characteristic but solvent-extractable biomarker compounds. Languri found that the asphaltene fractions may provide a better source for asphalt markers in paintings. Very characteristically for these substances appeared also the occurrence of homologous series of peaks with mass increments of 14 amu (from m/z 372 to 568). So, with sufficient amounts of sample material and under favourable conditions, it may be possible to obtain a positive identification of asphalt in a painting.

Languri shows in chapter 3 that the chances for such a reliable identification of mummy are very small indeed. The relevant section in Lucas's book on Egyptian materials soon tells us why this is so. Mummy is described as a dark brown pigment prepared from the bones and bodily remains of embalmed Egyptian mummies. The recorded procedures for the transformation of the body into a mummy would necessarily have introduced many different substances, each contributing to the signal in the mass spectrometer. The body might be smoke-blackened from a fire used to dry it; the mummy might therefore contain soot and various polycyclic aromatics resulting from incomplete combustion. There would be remnants of natron solutions, containing contaminants of sodium chloride and sodium sulphates. The intestines were treated with 'palm wine and spices, the cavity being filled with myrrh, cassia and other aromatic substances…treated with natron, wrapped in linen bandages, which were fastened with gum.'[2] The list of substances goes on to include onions, resins, beeswax, cinnamon, tar, sawdust, wood pitch, cedar oil, henna, honey and juniper berries. And yes, the body was also soaked in bitumen. With such a multitude of compounds, it is not surprising that analysis of a reference sample from the Hafkenscheid collection resulted in the remarks that the components '*could* have originated from real mummies…' and that 'material was not *dissimilar* to mummies embalmed with asphalt…' There could be no certainty that the material was a true ground-up dead Egyptian. And this was the outcome of analyses on a relatively large sample from a reference collection. A positive identification with any degree of certainty of mummy pigment in an actual micro-sample from a painting remains highly unlikely.

The outcome of Languri's studies on Kassel earth pigments was more rewarding. Chapter 4 proves to be a very valuable complement to Feller's study of these pigments.[3] The value of mass spectrometric techniques over FTIR or microscopy for the full characterisation of these brown earths and their components is satisfactorily demonstrated. Languri's examination of various Kassel earth standards from different reference collections characterised all Kassel earth-like pigments as lignites or brown coal. These lignites form two distinct varieties: true Cassel and Cologne earths, which are characterised by an abundance of fossil leaf material, and Vandyke brown, in which material from wood tissue is more prominent.

Armed with a thorough understanding of these geo-pigments, Languri sets out in chapter 5 to investigate the drying properties of oil paints with asphalt and Kassel earths (not mummy). This was done in reconstructions made in dichloromethane solutions. Such solutions produce, in a short time, changes in the reconstructed oil paint films that are similar to those in normal atmosphere-dried oil paints. It accelerates the process so that only a few weeks of artificial-light ageing is equivalent to the many months necessary for conventional artificial ageing.
Testing the aged samples (for instance on the relative amounts of azelaic acid as a marker for antioxidant activity) the outcome was that the presence of asphalt would result in less oxidation of the oil. Diglycerides and triglycerides remain present and do not form new compounds. In short, asphalt does indeed impede a normal drying of the oil. Contrary to common belief, Kassel earths have no special influence on the drying of oil paint. In fact, the Kassel earth paint showed a drying of the oil that would be similar to that of a lead white paint! (p. 165). Although Kassel earth pigments contain lignin-derived phenolic compounds; a pure Kassel earth would not have a negative effect on the oxidative drying of oil paints.

Languri rightly stresses the point that painting defects cannot always be attributed to faulty pigments or paints.

After all the elaborate tests that have been done on these geo-pigments, it is at the same time disconcerting and reassuring to read that the poor drying of the oil 'seems to be more related to the overall paint composition, painting technique and restoration techniques than to the presence of a single culprit like asphalt.' This book can be very well recommended. It provides useful new insights. Languri presents her sometimes very technical arguments in every chapter in a clear, convincing and concise manner. The black and white figures that support the text are cleverly selected; the captions are informative. As Languri's research is of a very technical nature, jargon cannot always be avoided. Much of the information hidden behind mass spectrometry data is communicable only to specialists. Fortunately, with the greater professionalism of paintings conservators and curators, this type of information is becoming comprehensible to a larger audience. Anyone responsible for the care of darkened nineteenth century paintings should have Languri's work on the bookshelves.

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Notes

* Many of the chapters in this PhD-dissertation have appeared as articles in scientific periodicals like the Journal of Analytical and Applied Pyrolysis, or Advances in Mass Spectrometry.

1 J. de Gruyter, *De Haagse School*, (Rotterdam, 1968), vol. I, 46.

2 See A. Lucas and J.R. Harris, *Ancient Egyptian Materials and Industries*, (London, 1962), 270–326.

3 R.L. Feller, and R.M. Johnston-Feller, 'Vandyke brown, Cassel earth, Cologne earth', in *Artists' Pigments*, E. West FitzHugh ed., vol. 3, (Washington, 1997), 157–190.

‣ Recent PhD theses on technical art history in the Netherlands.

· R. Duits, *Drappi d'oro. Luxe stoffen en hun weergave in de schilderkunst van de Renaissance*, University of Utrecht, 2001.

· E.C. de Groot, *De Atlas Blaeu-van der Hem. De verzamelde wereld van een 17de eeuwse liefhebber*, Catholic University Nijmegen, 2001, 't Goy-Houten: HES & De Graaf Publishers.

· E.E.P. Kolfin, *Een geselschap jonge luyden. Productie, functie en betekenis van Noord-Nederlandse voorstellingen van vrolijke gezelschappen, 1610-1645*, Leiden University, 2001.

· H.H.M. Hermens, *Memories of Beautiful Colours. The Mariani treatise and the practice of miniature painting, landscape drawing and botanical illustration at the Pesaro court in early-seventeenth century Italy*, Leiden University, 2002, forthcoming publication, Archetype Books, London.

· E.J.B.D. van Binnebeke, *Willem Danielsz. van Tetrode. De Delftse Praxiteles. Een studie naar het leven en het werk van een zestiende-eeuwse Nederlandse beeldhouwer*, University of Utrecht, 2003.

· M.I. Tuijn, *Mon cher ami... Lieber Does...: Theo van Doesburg en de praktijk van de internationale avant-garde*, University of Amsterdam, 2003.

· J. Dik, *Scientific Analysis of Historical Paint and the Implications for Art History and Art Conservation*. University of Amsterdam, (Amsterdam, 2003). ISBN 90-9016479-0

· Ann-Sophie Lehmann, *Jan van Eyck und der Akt in der frühniederländischen Malerei. Rezeption, Bedeutung und Maltechnik der Adam und Eva-Tafeln in Gent*, University of Utrecht, 2004.

‣ MOLART reports 1999–2004

MOLART- Molecular Aspects of Ageing of Painted Works of Art- a co-operative project (1995–2003) between art historians, restorers, analytical chemists and technical physicists funded by the Dutch Organisation for Scientific Research (NWO). The reports summarise all research results obtained in the course of the project (all except 2 and 10 are PhD theses).

10 *Analysis of diterpenoid resins and polymers in paint media and varnishes: with an atlas of mass spectra*, Klaas Jan van den Berg (forthcoming 2004).

9 *Molecular studies of Asphalt, Mummy and Kassel earth pigments: their characterisation, identification and effect on the drying of traditional oil paint*, Georgiana M. Languri, University of Amsterdam, 2004.
ISBN: 90-77209-07-7

8 *Laser desorption mass spectrometric studies of artists' organic pigments*, Nicolas Wyplosz, University of Amsterdam, 2003.
ISBN: 90-77209-02-6

7 *Microspectroscopic analysis of traditional oil paint*, Jaap van der Weerd, University of Amsterdam, 2002.
ISBN: 90-801704-8-8

6 *Analytical chemical studies on traditional linseed oil paints*, Jorrit Dirk Jan van den Berg, University of Amsterdam, 2002. ISBN: 90-801704-7-X

5 *Changing Pictures- Discolouration in 15th to 17th Century Oil Paintings*, Margriet van Eikema Hommes, 2002.
In press Archetype Books, London.
ISBN: 1873132395

4 *Molecular changes in egg tempera paint dosimeters as tools to monitor the museum environment*, Oscar O. van den Brink, University of Amsterdam, 2001.
ISBN: 90-801704-6-1

3 *Solvent extractable components of oil paint films*, Kenneth R. Sutherland, University of Amsterdam, 2001.
ISBN 90801704-4-5
2 *A mathematical study on craquelure and other mechanical damage in paintings*, Petri de Willigen, Delft University, 1999.
ISBN 90-407-1946-2
1 *Molecular studies of fresh and aged triterpenoid varnishes*, Gisela A. van der Doelen, University of Amsterdam,1999.
ISBN90-801704-3-7

Published MOLART reports can be ordered from Archetype Publications, 6 Fitzroy Square, London WIT 5HJ, England, tel: +44 207 380 0800 fax: +44 207 380 0500, info@archetype.co.uk

Working group Art Technological Source Research

Recipe books, treatises and manuals on artists' materials, tools and methods are of fundamental importance for an understanding of how art objects were made. Their value is, however, poorly recognised by art historians, conservators and others working with art objects.
A miscellaneous group of ten researchers from Canada, England, Germany, Greece and the Netherlands with a wide experience in the study of these particular sources gathered at the Instituut Collectie Nederland (ICN) in Amsterdam, March 20th, 2002 to discuss the field as a whole. At the end of the day it was decided to form a working group on Art Technological Source Research, ATSR.

ATSR's research field is art technology, defined as knowledge concerning the production of works of art or craft. The kinds of sources to be studied to this end are: the object itself; information given directly or indirectly by the artist or craftsman of the object; realia (i.e. surviving historical materials, tools, machines and sites related to the production process); contemporary information; and relevant modern studies. The emphasis lies on documentary information from textual or visual sources.

The main objective of the ATSR working group is to encourage research into art technological sources on a professional basis. Further important objectives are: to be a platform for the exchange and dissemination of information on the subject; and to systematize the tools and techniques for this type of research.

The first major activity of the ATSR working group was the organisation of the Symposium 'Approaching the Art of the Past: Sources & Reconstructions' at the ICN on 14 and 15 October 2004. Members of the working group are currently involved in various projects, such as the edition of a Manual on Art Technology, an annotated edition of the Tegernsee Manuscript and an annotated Bibliography of Manuals on Intaglio Printmaking Techniques.

The group is extending the number of its members and has the intention to operate under the umbrella of ICOM-CC in the near future.
For further information on the working group and its activities see: http://www.echn.net/atsr/index.aspx.
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ICOM-CC 14th Triennial Meeting in The Hague
12–16 September 2005

'Our cultural past-your future !'

The Fourteenth Triennial Meeting of ICOM's Committee for Conservation (ICOM–CC) will be held in The Hague in the Netherlands from 12–16 September 2005.

The Netherlands is very active in a variety of areas related to preventive conservation, materials' research and conservation treatment. These activities are the positive outcome of the celebrated Deltaplan for Cultural Heritage, which started in 1992 and went on for more than a decade. The leading institute in the Deltaplan was the Instituut Collectie Nederland (ICN), the Netherlands Institute for Cultural Heritage, which is also organizing the Fourteenth Triennial Meeting.

The Conference Theme:
'Our cultural past–your future!'

In addition to a week full of high-quality presentations on issues relating to every aspect within the conservation field, ranging from ancient to contemporary art, from natural history and rock art to modern materials and plastics, there will also be plenary sessions devoted to conservation and to the attitude of the public towards Cultural Heritage.

The subject of this ICOM–CC 2005 Triennial Meeting will be the exploration and design of different strategies and methods aimed at involving the public in issues surrounding Cultural Heritage and its preservation. In order to secure the future of Cultural Heritage preservation, it is imperative to achieve the understanding, commitment and support of the public. This can only be done by promotion of active public participation in the dynamics of conservation efforts.

It is only fitting that the profession should adapt to the modern climate, becoming more transparent and receptive, and interacting with the community that it serves. This is a two-way approach: conservation professionals and decision-makers have to change traditional attitudes towards the public, and the public needs to understand the decision process and the reasoning behind conservation methods. Only then will members of the public be able to take an active role in supporting the process and participate in the preservation of their own heritage.

ICOM-CC

ICOM (The International Council of Museums) is an international organisation of museums and museum professionals, which is committed to the conservation, continuation and communication to society of the world's natural and cultural heritage, present and future, tangible and intangible. Established in 1946 with links to UNESCO it now has over 18,000 members in 143 countries.

ICOM–CC is the conservation committee of ICOM, and it is the largest of ICOM's international committees. With members worldwide and from every branch of the conservation profession, ICOM–CC has an influential position within the global museum community.

The various Working Groups have a pivotal role within ICOM–CC. Within the Working Groups, personal relationships and collaboration are easily established and knowledge helpfully exchanged across borders and continents. There are currently 22 Working Groups. See www.icom-cc.museum.

Recently in autumn 2003 the ICN organizing committee for ICOM–CC Triennial Meeting in The Hague 2005 was installed. The following persons will do their utmost to make this conference to a success: Wim Jacobs – project leader, Eelke Boswijk – project advisor, Floor Kok – project coordinator, Marina Raymakers – communications. All the information about the 14th Triennial Meeting can be found on a special website www.icom-cc2005.org.

The Fourteenth Triennial Meeting of ICOM–CC will be planned by the ICN (www.icn.nl); NMV, the Dutch Museum Association (www.museumvereniging.nl), VeRes, the Dutch organisation for conservators and restorers (www.conserveer.nl/VeRes/VeRes-adres.htm); ICOM-Netherlands; and the local authority in The Hague. The conference venue will be the Nederlands Congres Centrum (www.congresscentre.nl).

Colophon

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Umbrella mask, collection Wereldmuseum, Rotterdam (© Wereldmuseum, Rotterdam, photographer: Bob Goedewaagen, Rotterdam)

The yearbook '*ArtMatters – Netherlands Technical Studies in Art*' presents a collection of lavishly illustrated articles by scholars working in the interdisciplinary field of technical art history.
Drawing on the combined expertise of conservators, scientists and art historians, ArtMatters brings together a wealth of information about artists' materials, techniques and studio practice, from different periods and disciplines.

ArtMatters goes beyond the pure identification of materials. It addresses the connection between the artist's methods and intentions, as well as the relations between changes in style, technical developments and materials available, all set against an art historical context.

ArtMatters provides fascinating accounts of the artist at work. The articles illustrate the significant role the study of techniques and materials can have within art historical research and its various philosophical approaches towards the understanding of art works.

ArtMatters creates illuminating insights into the artist's original intention and its material expression, insights that characterise current conservation research as a whole.

ArtMatters is therefore an invaluable resource for art historians, conservators, collectors, and all those interested in the making of artworks.

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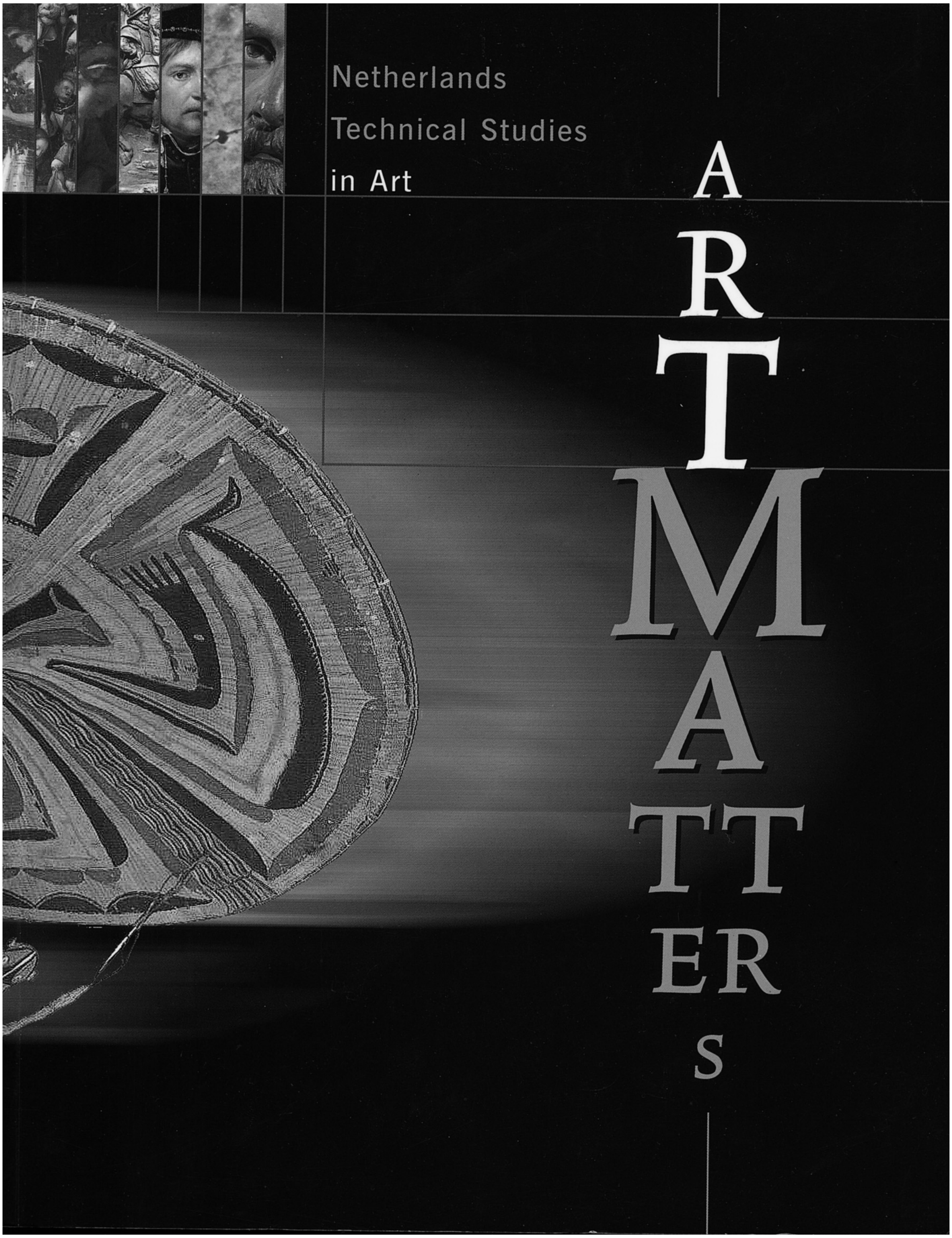
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