Science and Art: The Painted Surface

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From Royal Society of Chemistry : Science and Art: The Painted Surface before purchasing it in order to gage whether or not it would be worth my time, and all praised Science and Art: The Painted Surface:

Science and art are increasingly interconnected in the activities of the study and conservation of works of art. Science plays a key role in cultural heritage, from developing new analytical techniques for studying the art, to investigating new ways of preserving the materials for the future. For example, high resolution multispectral examination of

paintings allows art historians to view underdrawings barely visible before, while the use of non-invasive and micro-sampling analytical techniques allow scientists to identify pigments and binders that help art conservators in their work. It also allows curators to understand more about how the artwork was originally painted.Through a series of case studies written by scientists together with art historians, archaeologists and conservators, Science and Art: The Painted Surface demonstrates how the cooperation between science and humanities can lead to an increased understanding of the history of art and to better techniques in conservation. The examples used in the book cover paintings from ancient history, Renaissance, modern, and contemporary art, belonging to the artistic expressions of world regions from the Far East to America and Europe. Topics covered include the study of polychrome surfaces from pre-Columbian and medieval manuscripts, the revelation of hidden images below the surface of Van Gogh paintings and conservation of acrylic paints in contemporary art.Presented in an easily readable form for a large audience, the book guides readers into new areas uncovered by the link between science and art. The book features contributions from leading institutions across the globe including the Metropolitan Museum of Art, New York; Art Institute of Chicago; Getty Conservation Institute; Opificio delle Pietre Dure, Firenze; National Gallery of London; Tate Britain; Warsaw Academy of Fine Art and the National Gallery of Denmark as well as a chapter covering the Thangka paintings by Nobel Prize winner Richard Ernst.

This volume shows a global solution to a long-discussed problem: how to get scientists, art historians and conservators working together. The book presents a host of projects where collaboration has allowed all of these groups to learn from one another.Some chapters describe the science and techniques, useful for scientists wishing to work in a similar setting; others focus on the art, showing how the results of scientific studies have led to a deeper understanding of a corpus of artifacts, linking to particular cultural traditions.Unsurprisingly, given the editorial board of the book, Science and art gives the reader an overview of the diverse range of projects that Charisma (cultural heritage advanced research, a multidisciplinary conservation and restoration project) researchers have been involved with. The book shows a number of analytical techniques that are now becoming essential in conservation science. Charisma researchers, along with other scientific experts, used their expertise to reveal hidden depths in many famous works.The book discusses various techniques, focusing on non-invasive methods such as infrared reflectance, Raman spectroscopy, x-ray fluorescence and multispectral imaging as well as the more exotic synchrotron x- ray analysis.Science and art also provides an excellent read for art historians, who will instantly recognise the famous pieces that have been studied, while giving them insight into how a painting was constructed, what it is made from, or how the colours would have looked when they were freshly painted.I was struck by the editors' choice not to only focus on European works, but to take a worldwide view, including chapters on Mayan manuscripts, Tibetan paintings and Japanese panels. This clearly shows that this blossoming research area requires even more bridges to be built, spanning research communities and forging stronger links between them. (Catherine Emma Nicholson Chemistry World)This volume shows a global solution to a long-discussed problem: how to get scientists, art historians and conservators working together. The book presents a host of projects where collaboration has allowed all of these groups to learn from one another. Some chapters describe the science and techniques, useful for scientists wishing to work in a similar setting; others focus on the art, showing how the results of scientific studies have led to a deeper understanding of a corpus of artifacts, linking to particular cultural traditions.Science and art also provides an excellent read for art historians, who will instantly recognise the famous pieces that have been studied, while giving them insight into how a painting was constructed, what it is made from, or how the colours would have looked when they were freshly painted. (Catherine Emma Nicholson Chemistry World)Although aimed at both scholars and students, the book is more than just technical descriptions: it also covers art history and provenance and should appeal to those who appreciate art, not just artists and curators.Several chapters of interest to those who appreciate applications of analytical science to works of art representing their personal interests. This book could be an inspiration for courses titled Chemistry for Artists and Art Historians. In addition, various chapters could be inspiration for student research projects, especially for contemporary art. Science and Art is recommended for students, teachers, and the general public who are interested in chemistry or other sciences and art, as well as applications of the former to the latter. (Robert E. Buntrock Journal of Chemical Education)From the Back CoverScience and art are increasingly interconnected in the activities of the study and conservation of works of art. Science plays a key role in cultural heritage, from developing new analytical techniques for studying the art, to investigating new ways of preserving the materials for the future. For example, high resolution multispectral examination of paintings allows art historians to view underdrawings barely visible before, while the use of non-invasive and micro-sampling analytical techniques allow scientists to identify pigments and binders that help art conservators in their work. It also allows curators to understand more about how the artwork was originally painted.Through a series of case studies written by scientists together with art historians, archaeologists and conservators, Science and Art: The Painted Surface demonstrates how the cooperation between science and humanities can lead to an increased understanding of the history of art and to better techniques in conservation. The examples used in the book cover paintings from ancient history, Renaissance, modern, and contemporary art, belonging to the artistic expressions of world regions from the Far East to America and

Europe. Topics covered include the study of polychrome surfaces from pre-Columbian and medieval manuscripts, the revelation of hidden images below the surface of Van Gogh paintings and conservation of acrylic paints in contemporary art.Presented in an easily readable form for a large audience, the book guides readers into new areas uncovered by the link between science and art. The book features contributions from leading institutions across the globe including the Metropolitan Museum of Art, New York; Art Institute of Chicago; Getty Conservation Institute; Opificio delle Pietre Dure, Firenze; National Gallery of London; Tate Britain; Warsaw Academy of Fine Art and the National Gallery of Denmark as well as a chapter covering the Thangka paintings by Nobel Prize winner Richard Ernst.About the AuthorAntonio Sgamellotti is an Academician of Lincei and Professor of Inorganic Chemistry at the University of Perugia. He is also Co-founder of the Center of Excellence SMAArt (Scientific Methodologies applied to Archaeology and Art). His research interests include advanced computations on chemistry, electronic and structural properties of molecules and inorganic materials, spectroscopic properties and characterization of archaeological and art-historical artefacts.Brunetto Giovanni Brunetti is a Full Professor of General and Inorganic Chemistry at the University of Perugia. He is also the coordinator for the European project CHARISMA (Cultural Heritage Advanced Research Infrastructures: Synergy for a Multidisciplinary Approach to Conservation/Restoration) and President of the Center of Excellence SMAArt (Scientific Methodologies applied to Archaeology and Art).Costanza Miliani is a researcher at the CNR Institute of Molecular Science and Technology (CNR-ISTM) and coordinator of the mobile laboratory MOLAB of the CHARISMA project. His research interests include non-invasive spectroscopic techniques for in-situ investigations on cultural heritage.