

ERRATUM: “Versailles project on advanced materials and standards interlaboratory study on intensity calibration for x-ray photoelectron spectroscopy instruments using low-density polyethylene” [J. Vac. Sci. Technol. A 38, 063208 (2020)]

Cite as: J. Vac. Sci. Technol. A 39, 027001 (2021); <https://doi.org/10.1116/6.0000907>

Submitted: 04 January 2021 . Accepted: 05 January 2021 . Published Online: 25 January 2021

 Benjamen P. Reed,  David J. H. Cant, Steve J. Spencer, Abraham Jorge Carmona-Carmona, Adam Bushell,  Alberto Herrera-Gómez,  Akira Kurokawa, Andreas Thissen,  Andrew G. Thomas, Andrew J. Britton,  Andrzej Bernasik, Anne Fuchs,  Arthur P. Baddorf, Bernd Bock, Bill Theilacker, Bin Cheng, David G. Castner,  David J. Morgan, David Valley, Elizabeth A. Willneff,  Emily F. Smith,  Emmanuel Nolot, Fangyan Xie, Gilad Zorn, Graham C. Smith,  Hideyuki Yasufuku, Jeffrey L. Fenton, Jian Chen, Jonathan D. P. Counsell,  Jörg Radnik, Karen J. Gaskell,  Kateryna Artyushkova, Li Yang,  Lulu Zhang, Makiko Eguchi,  Marc Walker, Mariusz Hajdyła, Mateusz M. Marzec,  Matthew R. Linford, Naoyoshi Kubota, Orlando Cortazar-Martínez,  Paul Dietrich, Riki Satoh,  Sven L. M. Schroeder,  Tahereh G. Avval, Takaharu Nagatomi, Vincent Fernandez, Wayne Lake,  Yasushi Azuma, Yusuke Yoshikawa,  Claudia L. Compean-Gonzalez,  Giacomo Ceccone, and  Alexander G. Shard



[View Online](#)



[Export Citation](#)



[CrossMark](#)

ARTICLES YOU MAY BE INTERESTED IN

[Versailles Project on Advanced Materials and Standards interlaboratory study on intensity calibration for x-ray photoelectron spectroscopy instruments using low-density polyethylene](#)
Journal of Vacuum Science & Technology A 38, 063208 (2020); <https://doi.org/10.1116/6.0000577>

[Practical guide to the use of backgrounds in quantitative XPS](#)
Journal of Vacuum Science & Technology A 39, 011201 (2021); <https://doi.org/10.1116/6.0000661>

[Introduction to topical collection: Reproducibility challenges and solutions with a focus on guides to XPS analysis](#)
Journal of Vacuum Science & Technology A 39, 021601 (2021); <https://doi.org/10.1116/6.0000873>



HIDEN
ANALYTICAL

Instruments for **Advanced Science**

<ul style="list-style-type: none">■ Knowledge,■ Experience,■ Expertise <p>Click to view our product catalogue</p> <p>Contact Hiden Analytical for further details: W www.HidenAnalytical.com E info@hiden.co.uk</p>	<p>Gas Analysis</p> <ul style="list-style-type: none">▶ dynamic measurement of reaction gas streams▶ catalysis and thermal analysis▶ molecular beam studies▶ dissolved species probes▶ fermentation, environmental and ecological studies	<p>Surface Science</p> <ul style="list-style-type: none">▶ UHV TPD▶ SIMS▶ end point detection in ion beam etch▶ elemental imaging - surface mapping	<p>Plasma Diagnostics</p> <ul style="list-style-type: none">▶ plasma source characterization▶ etch and deposition process reaction kinetic studies▶ analysis of neutral and radical species	<p>Vacuum Analysis</p> <ul style="list-style-type: none">▶ partial pressure measurement and control of process gases▶ reactive sputter process control▶ vacuum diagnostics▶ vacuum coating process monitoring
--	--	---	--	---

ERRATUM: “Versailles project on advanced materials and standards interlaboratory study on intensity calibration for x-ray photoelectron spectroscopy instruments using low-density polyethylene” [J. Vac. Sci. Technol. A 38, 063208 (2020)]

Cite as: J. Vac. Sci. Technol. A 39, 027001 (2021); doi: 10.1116/6.0000907

Submitted: 4 January 2021 · Accepted: 5 January 2021 ·

Published Online: 25 January 2021



View Online



Export Citation



CrossMark

Benjamen P. Reed,^{1,a)} David J. H. Cant,¹ Steve J. Spencer,¹ Abraham Jorge Carmona-Carmona,² Adam Bushell,³ Alberto Herrera-Gómez,² Akira Kurokawa,⁴ Andreas Thissen,⁵ Andrew G. Thomas,⁶ Andrew J. Britton,⁷ Andrzej Bernasik,⁸ Anne Fuchs,⁹ Arthur P. Baddorf,¹⁰ Bernd Bock,¹¹ Bill Theilacker,¹² Bin Cheng,¹³ David G. Castner,¹⁴ David J. Morgan,¹⁵ David Valley,¹⁶ Elizabeth A. Willneff,¹⁷ Emily F. Smith,¹⁸ Emmanuel Nolot,¹⁹ Fangyan Xie,²⁰ Gilad Zorn,²¹ Graham C. Smith,²² Hideyuki Yasufuku,²³ Jeffrey L. Fenton,²⁴ Jian Chen,²⁰ Jonathan D. P. Counsel,²⁵ Jörg Radnik,²⁶ Karen J. Gaskell,²⁷ Kateryna Artyushkova,¹⁶ Li Yang,²⁸ Lulu Zhang,⁴ Makiho Eguchi,²⁹ Marc Walker,³⁰ Mariusz Hajdynia,⁸ Mateusz M. Marzec,⁸ Matthew R. Linford,³¹ Naoyoshi Kubota,²⁹ Orlando Cortazar-Martinez,² Paul Dietrich,⁵ Riki Satoh,²⁹ Sven L. M. Schroeder,⁷ Tahereh G. Avval,³¹ Takaharu Nagatomi,³² Vincent Fernandez,³³ Wayne Lake,³⁴ Yasushi Azuma,⁴ Yusuke Yoshikawa,^{35,b)} Claudia L. Compean-Gonzalez,⁶ Giacomo Ceccone,³⁶ and Alexander G. Shard¹

AFFILIATIONS

¹National Physical Laboratory, Hampton Road, Teddington TW11 0LW, United Kingdom

²CINVESTAV-Unidad Queretaro, Queretaro 76230, Mexico

³Thermo Fisher Scientific (Surface Analysis), East Grinstead RH19 1XZ, United Kingdom

⁴National Metrology Institute of Japan (NMIJ), National Institute of Advanced Industrial Science and Technology (AIST), 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan

⁵SPECS Surface Nano Analysis GmbH, Voltastraße 5, 13355 Berlin, Germany

⁶School of Materials, Photon Science Institute and Sir Henry Royce Institute, Alan Turing Building, University of Manchester, Oxford Road, Manchester M13 9PL, United Kingdom

⁷Versatile X-ray Spectroscopy Facility, School of Chemical and Process Engineering, University of Leeds, Leeds LS2 9JT, United Kingdom

⁸Academic Centre for Materials and Nanotechnology, AGH University of Science and Technology, 30-059 Kraków, Poland

⁹Robert Bosch GmbH, Robert-Bosch-Campus, 71272 Renningen, Germany

¹⁰Center for Nanophase Materials Sciences, Oak Ridge National Laboratory, 1 Bethel Valley Road, Oak Ridge, Tennessee 37830

¹¹Tascon GmbH, Mendelstr. 17, D-48149 Münster, Germany

¹²Medtronic, 710 Medtronic Parkway, LT240, Fridley, Minnesota 55432

¹³Analysis and Testing Center, Beijing University of Chemical Technology, Beijing 100029, People's Republic of China

¹⁴National ESCA and Surface Analysis Center for Biomedical Problems, Department of Bioengineering and Chemical Engineering, University of Washington, Seattle, Washington 98195

¹⁵Cardiff Catalysis Institute, School of Chemistry, Cardiff University, Main Building, Cardiff CF10 3AT, United Kingdom

- ¹⁶Physical Electronics Inc., East Chanhassen, Minnesota 55317
- ¹⁷Versatile X-ray Spectroscopy Facility, School of Design, University of Leeds, Leeds LS2 9JT, United Kingdom
- ¹⁸Nanoscale and Microscale Research Centre, University of Nottingham, Nottingham NG7 2RD, United Kingdom
- ¹⁹CEA-LETI, 17 rue des Martyrs, 38054 Grenoble, France
- ²⁰Instrumental Analysis & Research Center, Sun Yat-sen University, Guangzhou 510275, People's Republic of China
- ²¹GE Research, 1 Research Circle, K1 1D7A, Niskayuna, New York 12309
- ²²Faculty of Science and Engineering, University of Chester, Thornton Science Park, Chester CH2 4NU, United Kingdom
- ²³Materials Analysis Station, National Institute for Materials Science (NIMS), 1-2-1 Sengen, Tsukuba, Ibaraki 305-0044, Japan
- ²⁴Medtronic, 6700 Shingle Creek Parkway, Brooklyn Center, Minnesota 55430
- ²⁵Kratos Analytical Ltd., Wharfside, Trafford Wharf Road, Manchester M17 1GP, United Kingdom
- ²⁶Bundesanstalt für Materialforschung und -prüfung (BAM), Unter den Eichen 44-46, 12203 Berlin, Germany
- ²⁷Department of Chemistry and Biochemistry, University of Maryland, College Park, Maryland 20742
- ²⁸Department of Chemistry, Xi'an Jiaotong-Liverpool University, 111 Ren'ai Road, Suzhou Dushu Lake Science and Education Innovation District, Suzhou Industrial Park, Suzhou 215123, People's Republic of China
- ²⁹Analysis Department, Materials Characterization Division, Futtsu Unit, Nippon Steel Technology Co. Ltd., 20-1 Shintomi, Futtsu City, Chiba 293-0011, Japan
- ³⁰Department of Physics, University of Warwick, Coventry, West Midlands CV4 7AL, United Kingdom
- ³¹Department of Chemistry and Biochemistry, Brigham Young University, C100 BNSN, Provo, Utah 84602
- ³²Platform Laboratory for Science and Technology, Asahi Kasei Corporation, 2-1 Samejima, Fuji, Shizuoka 416-8501, Japan
- ³³Université de Nantes, CNRS, Institut des Matériaux Jean Rouxel, IMN, F-44000 Nantes, France
- ³⁴Atomic Weapons Establishment (AWE), Aldermaston, Reading, Berkshire RG7 4PR, United Kingdom
- ³⁵Material Analysis Department, Yazaki Research and Technology Center, Yazaki Corporation, 1500 Mishuku, Susono-city, Shizuoka 410-1194, Japan
- ³⁶European Commission Joint Research Centre, Via E. Fermi 2749, 21027 Ispra, VA, Italy

a) Author to whom correspondence should be addressed: benjamen.reed@npl.co.uk

b) Present address: Technical & Project Support Department, Nidec Sankyo CMI Corporation, 46-1, Senpuku, Susono-city, Shizuoka 460-1116, Japan.

Published under license by AVS. <https://doi.org/10.1116/6.0000907>

The lead authors failed to name two collaborators as co-authors. The authors listed should include:

Miss Claudia L. Compean-Gonzalez (ORCID: 0000-0002-2367-8450) and Dr. Giacomo Ceccone (ORCID: 0000-0003-4637-0771).

These co-authors participated in VAMAS project A27, provided data that were analyzed and presented in this publication (and supporting information), and reviewed the manuscript before submission. The correct authors and affiliations for this article are therefore listed below.

Benjamen P. Reed,^{1,a)} David J. H. Cant,¹ Steve J. Spencer,¹ Abraham Jorge Carmona-Carmona,² Adam Bushell,³ Alberto Herrera-Gómez,² Akira Kurokawa,⁴ Andreas Thissen,⁵ Andrew G. Thomas,⁶ Andrew J. Britton,⁷ Andrzej Bernasik,⁸ Anne Fuchs,⁹ Arthur P. Baddorf,¹⁰ Bernd Bock,¹¹ Bill Theilacker,¹² Bin Cheng,¹³ David G. Castner,¹⁴ David J. Morgan,¹⁵ David Valley,¹⁶ Elizabeth A. Willneff,¹⁷ Emily F. Smith,¹⁸ Emmanuel Nolot,¹⁹ Fangyan Xie,²⁰ Gilad Zorn,²¹ Graham C. Smith,²² Hideyuki Yasufuku,²³ Jeffrey L. Fenton,²⁴ Jian Chen,²⁰ Jonathan D. P. Counsell,²⁵ Jörg Radnik,²⁶ Karen J. Gaskell,²⁷ Kateryna Artyushkova,¹⁶ Li Yang,²⁸ Lulu

Zhang,⁴ Makiho Eguchi,²⁹ Marc Walker,³⁰ Mariusz Hajdyka,⁸ Mateusz M. Marzec,⁸ Matthew R. Linford,³¹ Naoyoshi Kubota,²⁹ Orlando Cortazar-Martínez,² Paul Dietrich,⁵ Riki Satoh,²⁹ Sven L. M. Schroeder,⁷ Tahereh G. Avval,³¹ Takaharu Nagatomi,³² Vincent Fernandez,³³ Wayne Lake,³⁴ Yasushi Azuma,⁴ Yusuke Yoshikawa,^{35,b)} Claudia L. Compean-Gonzalez,⁶ Giacomo Ceccone,³⁶ and Alexander G. Shard¹

¹National Physical Laboratory, Hampton Road, Teddington TW11 0LW, United Kingdom

²CINVESTAV-Unidad Queretaro, Queretaro 76230, Mexico

³Thermo Fisher Scientific (Surface Analysis), East Grinstead RH19 1XZ, United Kingdom

⁴National Metrology Institute of Japan (NMIIJ), National Institute of Advanced Industrial Science and Technology (AIST), 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan

⁵SPECS Surface Nano Analysis GmbH, Voltastraße 5, 13355 Berlin, Germany

⁶School of Materials, Photon Science Institute and Sir Henry Royce Institute, Alan Turing Building, University of Manchester, Oxford Road, Manchester M13 9PL, United Kingdom

⁷Versatile X-ray Spectroscopy Facility, School of Chemical and Process Engineering, University of Leeds, Leeds LS2 9JT, United Kingdom

⁸Academic Centre for Materials and Nanotechnology, AGH University of Science and Technology, 30-059 Kraków, Poland

⁹Robert Bosch GmbH, Robert-Bosch-Campus, 71272 Renningen, Germany

¹⁰Center for Nanophase Materials Sciences, Oak Ridge National Laboratory, 1 Bethel Valley Road, Oak Ridge, Tennessee 37830

¹¹Tascon GmbH, Mendelstr. 17, D-48149 Münster, Germany

¹²Medtronic, 710 Medtronic Parkway, LT240, Fridley, Minnesota 55432

¹³Analysis and Testing Center, Beijing University of Chemical Technology, Beijing 100029, People's Republic of China

¹⁴National ESCA and Surface Analysis Center for Biomedical Problems, Department of Bioengineering and Chemical Engineering, University of Washington, Seattle, Washington 98195

¹⁵Cardiff Catalysis Institute, School of Chemistry, Cardiff University, Main Building, Cardiff CF10 3AT, United Kingdom

¹⁶Physical Electronics Inc., East Chanhassen, Minnesota 55317

¹⁷Versatile X-ray Spectroscopy Facility, School of Design, University of Leeds, Leeds LS2 9JT, United Kingdom

¹⁸Nanoscale and Microscale Research Centre, University of Nottingham, Nottingham NG7 2RD, United Kingdom

¹⁹CEA-LETI, 17 rue des Martyrs, 38054 Grenoble, France

²⁰Instrumental Analysis & Research Center, Sun Yat-sen University, Guangzhou 510275, People's Republic of China

²¹GE Research, 1 Research Circle, K1 1D7A, Niskayuna, New York 12309

²²Faculty of Science and Engineering, University of Chester, Thornton Science Park, Chester CH2 4NU, United Kingdom

²³Materials Analysis Station, National Institute for Materials Science (NIMS), 1-2-1 Sengen, Tsukuba, Ibaraki 305-0044, Japan

²⁴Medtronic, 6700 Shingle Creek Parkway, Brooklyn Center, Minnesota 55430

²⁵Kratos Analytical Ltd., Wharfside, Trafford Wharf Road, Manchester M17 1GP, United Kingdom

²⁶Bundesanstalt für Materialforschung und -prüfung (BAM), Unter den Eichen 44-46, 12203 Berlin, Germany

²⁷Department of Chemistry and Biochemistry, University of Maryland, College Park, Maryland 20742

²⁸Department of Chemistry, Xi'an Jiaotong-Liverpool University, 111 Ren'ai Road, Suzhou Dushu Lake Science and Education Innovation District, Suzhou Industrial Park, Suzhou 215123, People's Republic of China

²⁹Analysis Department, Materials Characterization Division, Futtsu Unit, Nippon Steel Technology Co. Ltd., 20-1 Shintomi, Futtsu City, Chiba 293-0011, Japan

³⁰Department of Physics, University of Warwick, Coventry, West Midlands CV4 7AL, United Kingdom

³¹Department of Chemistry and Biochemistry, Brigham Young University, C100 BNSN, Provo, Utah 84602

³²Platform Laboratory for Science and Technology, Asahi Kasei Corporation, 2-1 Samejima, Fuji, Shizuoka 416-8501, Japan

³³Université de Nantes, CNRS, Institut des Matériaux Jean Rouxel, IMN, F-44000 Nantes, France

³⁴Atomic Weapons Establishment (AWE), Aldermaston, Reading, Berkshire RG7 4PR, United Kingdom

³⁵Material Analysis Department, Yazaki Research and Technology Center, Yazaki Corporation, 1500 Mishuku, Susono-city, Shizuoka 410-1194, Japan

³⁶European Commission Joint Research Centre, Via E. Fermi 2749, 21027. Ispra, VA, Italy