**NEUTRON RADIOGRAPHIC IMAGING PAPERS published in 2020**

 30th July 2020

KEYWORDS: Neutron Radiography, Neutron Imaging, Neutron Tomography

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 Total number of papers listed : 107

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[**AIP Advances**](https://aip.scitation.org/journal/adv) **(1)**

[Feasibility study of a compact neutron resonance transmission analysis instrument](https://aip.scitation.org/doi/10.1063/1.5129961)

[Ezra M. Engel](https://aip.scitation.org/author/Engel%2C%2BEzra%2BM), [Ethan A. Klein](https://aip.scitation.org/author/Klein%2C%2BEthan%2BA), and [Areg Danagoulian](https://aip.scitation.org/author/Danagoulian%2C%2BAreg)

*AIP Advances 10, 015051 (2020);*[*https://doi.org/10.1063/1.5129961*](https://doi.org/10.1063/1.5129961)

[**Applied Physics Letters**](https://aip.scitation.org/journal/apl) **(2)**

[Neutron imaging of liquid-liquid systems containing paramagnetic salt solutions](https://aip.scitation.org/doi/abs/10.1063/1.5135390)

[T. A. Butcher](https://aip.scitation.org/author/Butcher%2C%2BT%2BA), [G. J. M. Formon](https://aip.scitation.org/author/Formon%2C%2BG%2BJ%2BM), [P. Dunne](https://aip.scitation.org/author/Dunne%2C%2BP), [T. M. Hermans](https://aip.scitation.org/author/Hermans%2C%2BT%2BM), [F. Ott](https://aip.scitation.org/author/Ott%2C%2BF), [L. Noirez](https://aip.scitation.org/author/Noirez%2C%2BL) and [J. M. D. Coey](https://aip.scitation.org/author/Coey%2C%2BJ%2BM%2BD)

*Appl. Phys. Lett. 116, 022405 (2020);*[*https://doi.org/10.1063/1.5135390*](https://doi.org/10.1063/1.5135390)

*January 2020*

[Visualization of compensating currents in type-II/1 superconductor via high field cooling](https://aip-scitation-org.ezproxye.bham.ac.uk/doi/full/10.1063/5.0004438)

[Jacopo Valsecchi](https://aip-scitation-org.ezproxye.bham.ac.uk/author/Valsecchi%2C%2BJacopo), [Jonathan S. White](https://aip-scitation-org.ezproxye.bham.ac.uk/author/White%2C%2BJonathan%2BS), [Marek Bartkowiak](https://aip-scitation-org.ezproxye.bham.ac.uk/author/Bartkowiak%2C%2BMarek), [Wolfgang Treimer](https://aip-scitation-org.ezproxye.bham.ac.uk/author/Treimer%2C%2BWolfgang), [Youngju Kim](https://aip-scitation-org.ezproxye.bham.ac.uk/author/Kim%2C%2BYoungju), [Seung Wook Lee](https://aip-scitation-org.ezproxye.bham.ac.uk/author/Lee%2C%2BSeung%2BWook), [Denis M. Gokhfeld](https://aip-scitation-org.ezproxye.bham.ac.uk/author/Gokhfeld%2C%2BDenis%2BM), [Ralph P. Harti](https://aip-scitation-org.ezproxye.bham.ac.uk/author/Harti%2C%2BRalph%2BP), [Manuel Morgano](https://aip-scitation-org.ezproxye.bham.ac.uk/author/Morgano%2C%2BManuel), [Markus Strobl](https://aip-scitation-org.ezproxye.bham.ac.uk/author/Strobl%2C%2BMarkus) and [Christian Grünzweig](https://aip-scitation-org.ezproxye.bham.ac.uk/author/Gr%C3%BCnzweig%2C%2BChristian)

[*Appl. Phys. Lett.*](https://aip-scitation-org.ezproxye.bham.ac.uk/journal/apl)*116, 192602 (2020);*[*https://doi-org.ezproxye.bham.ac.uk/10.1063/5.0004438*](https://doi-org.ezproxye.bham.ac.uk/10.1063/5.0004438)

[**Applied Radiation and Isotopes**](https://www.sciencedirect.com/journal/applied-radiation-and-isotopes/vol/161/suppl/C) **(1)**

[Neutronic feasibility study of using a multipurpose MNSR for BNCT, NR, and NAA](https://www.sciencedirect.com/science/article/abs/pii/S0969804318307942?via%3Dihub)

[J.Mokhtari, F.Faghihi, M.H. Choopan Dastjerdi, J.Khorsandi](https://www.sciencedirect.com/science/article/abs/pii/S0969804318307942?via%3Dihub#!)

[*Applied Radiation and Isotopes*](https://www.sciencedirect.com/science/journal/09698043)

[*Volume 161*](https://www.sciencedirect.com/science/journal/09698043/161/supp/C)*, July 2020, 109147*

*https://doi.org/10.1016/j.apradiso.2020.109147*

[**Applied Sciences**](file:///C%3A%5CUsers%5CJohn%5CDocuments%5CWebsite%20news%5CNew%20database%5CDOI%2010.3390%5Capp10113781) **(1)**

[Non-destructive and micro-invasive techniques for characterising the ancient Roman mosaic fragments](file:///C%3A%5CUsers%5CJohn%5CDocuments%5CWebsite%20news%5CNew%20database%5CDOI%2010.3390%5Capp10113781)

R.M. Ion, B.A. Bakirov, S.E. Kichanov, D.P. Kozlenko, A.V. Belushkin, C. Radulescu, I.D. Dulama, I.A. Bucurica, A.I. Gheboianu, R.M Stirbescu, S. Teodorescu, L. Iancu, M.E. David, R.M Grigorescu

*Applied Sciences, 10(3781), 2020 DOI 10.3390/app10113781*

[**ArXiv**](https://arxiv.org/) **(9)**

Single-Pixel Imaging with Neutrons

 [Yu-Hang He](https://arxiv.org/search/?searchtype=author&query=He%2C+Y), [Yi-Yi Huang](https://arxiv.org/search/?searchtype=author&query=Huang%2C+Y), [Zhi-Rong Zeng](https://arxiv.org/search/?searchtype=author&query=Zeng%2C+Z), [Yi-Fei Li](https://arxiv.org/search/?searchtype=author&query=Li%2C+Y), [Jun-Hao Tan](https://arxiv.org/search/?searchtype=author&query=Tan%2C+J), [Li-Ming Chen](https://arxiv.org/search/?searchtype=author&query=Chen%2C+L), [Ling-An Wu](https://arxiv.org/search/?searchtype=author&query=Wu%2C+L), [Ming-Fei Li](https://arxiv.org/search/?searchtype=author&query=Li%2C+M), [Bao-Gang Quan](https://arxiv.org/search/?searchtype=author&query=Quan%2C+B), [Song-Lin Wang](https://arxiv.org/search/?searchtype=author&query=Wang%2C+S), [Tian-Jiao Liang](https://arxiv.org/search/?searchtype=author&query=Liang%2C+T)

*Submitted 9 January, 2020; originally announced January 2020.*

[*arXiv:2001.03069*](https://arxiv.org/abs/2001.03069)*[[pdf](https://arxiv.org/pdf/2001.03069)]*

Multilayer 10B-RPC neutron imaging detector

[L. M. S. Margato](https://arxiv.org/search/?searchtype=author&query=Margato%2C+L+M+S), [A. Morozov](https://arxiv.org/search/?searchtype=author&query=Morozov%2C+A), [A. Blanco](https://arxiv.org/search/?searchtype=author&query=Blanco%2C+A), [P. Fonte](https://arxiv.org/search/?searchtype=author&query=Fonte%2C+P), [L. Lopes](https://arxiv.org/search/?searchtype=author&query=Lopes%2C+L), [K. Zeitelhack](https://arxiv.org/search/?searchtype=author&query=Zeitelhack%2C+K), [R. Hall-Wilton](https://arxiv.org/search/?searchtype=author&query=Hall-Wilton%2C+R), [C. Höglund](https://arxiv.org/search/?searchtype=author&query=H%C3%B6glund%2C+C), [L. Robinson](https://arxiv.org/search/?searchtype=author&query=Robinson%2C+L), [S. Schmidt](https://arxiv.org/search/?searchtype=author&query=Schmidt%2C+S), [P. Svensson](https://arxiv.org/search/?searchtype=author&query=Svensson%2C+P)

*Submitted 3 February, 2020; originally announced February 2020.*

[*arXiv:2002.00991*](https://arxiv.org/abs/2002.00991)*[[pdf](https://arxiv.org/pdf/2002.00991)]*

Dynamic Neutron Imaging of Argon Bubble Flow in Liquid Gallium in External Magnetic Field

Mihails Birjukovs, Valters Dzelme, Andris Jakovics, Knud Thomsen, Pavel Trtik

*Submitted 26 February, 2020;*

[*arXiv:2002.10970v pdf*](https://arxiv.org/pdf/2002.10970v1.pdf)

Microstructure and Water Absorption of Ancient Concrete from Pompeii: An Integrated Synchrotron Microtomography and Neutron Radiography Characterization

[Ke Xu](https://arxiv.org/search/?searchtype=author&query=Xu%2C+K), [Anton S. Tremsin](https://arxiv.org/search/?searchtype=author&query=Tremsin%2C+A+S), [Jiaqi Li](https://arxiv.org/search/?searchtype=author&query=Li%2C+J), [Daniela M. Ushizima](https://arxiv.org/search/?searchtype=author&query=Ushizima%2C+D+M), [Catherine A. Davy](https://arxiv.org/search/?searchtype=author&query=Davy%2C+C+A), [Amine Bouterf](https://arxiv.org/search/?searchtype=author&query=Bouterf%2C+A), [Ying Tsun Su](https://arxiv.org/search/?searchtype=author&query=Su%2C+Y+T), [Milena Marroccoli](https://arxiv.org/search/?searchtype=author&query=Marroccoli%2C+M), [Anna Maria Mauro](https://arxiv.org/search/?searchtype=author&query=Mauro%2C+A+M), [Massimo Osanna](https://arxiv.org/search/?searchtype=author&query=Osanna%2C+M), [Antonio Telesca](https://arxiv.org/search/?searchtype=author&query=Telesca%2C+A), [Paulo J. M. Monteiro](https://arxiv.org/search/?searchtype=author&query=Monteiro%2C+P+J+M)

*Submitted 26 May, 2020; originally announced May 2020*

*https://arxiv.org/abs/2005.13114*

[*arXiv:2005.13114*](https://arxiv.org/abs/2005.13114)*[[pdf](https://arxiv.org/pdf/2005.13114)]*

Development of a Neutron Imaging Sensor using INTPIX4-SOI Pixelated Silicon Devices

Y. Kamiyaa , T. Miyoshib , H. Iwasec , T. Inadaa , A. Mizushimad , Y. Mitad , K. Shimazoee, H. Tanakaf , I. Kurachig , Y. Araib

[*arXiv:2006.05658v1 [physics.ins-det] 10 Jun 2020*](https://arxiv.org/pdf/2006.05658v1.pdf)

Neutron Dark-Field Imaging with Edge Illumination

Marco Endrizzi, Gibril K. Kallon, Triestino Minniti, Rolf Brönnimann, Alessandro Olivo

[*arXiv:2006.12171v1 [physics.ins-det] 22 Jun 2020*](https://arxiv.org/pdf/2006.12171v1.pdf)

Electric field imaging using polarized neutrons

Yuan-Yu Jau, Daniel S. Hussey, Thomas R. Gentile, Wangchun Chen

[*arXiv:2006.03728*](https://arxiv.org/abs/2006.03728)*[physics.ins-det]*

Feasibility study of a compact Neutron Resonance Transmission Analysis instrument

Ezra M. Engel, Ethan A. Klein, Areg Danagoulian

*arXiv:1909.11120v3 [physics.ins-det] 28 Jan 2020*

Development of High Intensity Neutron Source at the European Spallation Source

V. Santoro ,K.H. Andersen, D. D. DiJulio , E. B. Klinkby, T. M. Miller, D. Milstead, G. Muhrer, M. Strobl, A. Takibayev, L. Zanini , O. Zimmer

[*arXiv:2002.03883v1 [physics.ins-det] 10 Feb 2020*](https://arxiv.org/pdf/2002.03883v1.pdf)

[**Chemical Engineering Science**  **(1)**](https://www.sciencedirect.com/journal/chemical-engineering-science/vol/211/suppl/C)

[Estimation of the local sublimation front velocities from neutron radiography and tomography of particulate matter](https://www.sciencedirect.com/science/article/pii/S0009250919307584?via%3Dihub)

[Gruber S](https://www.mendeley.com/authors/57211264254/), [Vorhauer N](https://www.mendeley.com/authors/36441845400/), [Schulz M](https://www.mendeley.com/authors/57214673506/), [Hilmer M](https://www.mendeley.com/authors/57211270052/), [Peters J](https://www.mendeley.com/authors/57211269378/), [Tsotsas E](https://www.mendeley.com/authors/7003540632/), [Foerst P](https://www.mendeley.com/authors/16549571100/)

*Chemical Engineering Science (2020) 211*

*DOI:*[*10.1016/j.ces.2019.115268*](https://dx.doi.org/10.1016/j.ces.2019.115268)

[**Energy Technology (1)**](https://onlinelibrary.wiley.com/toc/21944296/2020/8/2)

[Influence of the Cell Format on the Electrolyte Filling Process of Lithium-Ion Cells](https://onlinelibrary.wiley.com/doi/full/10.1002/ente.201801108)

[Günter F](https://www.mendeley.com/authors/57204787381/), [Rössler S](https://www.mendeley.com/authors/57208447754/), [Schulz M](https://www.mendeley.com/authors/57214673506/), [Braunwarth W](https://www.mendeley.com/authors/57195903344/), [Gilles R](https://www.mendeley.com/authors/7102269943/), [Reinhart G](https://www.mendeley.com/authors/7101858932/)

*Energy Technology (2020) 8(2)*

*DOI:*[*10.1002/ente.201801108*](https://dx.doi.org/10.1002/ente.201801108)

[**EPJ Web of Conferences**](https://www.epj-conferences.org/) **(6)**

[Fast neutron and γ-ray backscatter radiography for the characterization of corrosion-born defects in oil pipelines](https://www.epj-conferences.org/articles/epjconf/abs/2020/01/epjconf_animma2019_06009/epjconf_animma2019_06009.html)

Mauro Licata, Helen M. O. Parker, Michael D. Aspinall, Manuel Bandala, Frank Cave,

Sebatian Conway, Domas Gerta and Malcolm J. Joyce

*EPJ Web of Conferences*

*Published online: 20 January 2020*

*DOI:*[*https://doi.org/10.1051/epjconf/202022506009*](https://doi.org/10.1051/epjconf/202022506009)

[Preliminary Study on Improving Resolution of D-T Neutron Radiography based on Associated Alpha and Coded Source Imaging Methods](https://www.epj-conferences.org/articles/epjconf/abs/2020/01/epjconf_animma2019_07001/epjconf_animma2019_07001.html)

Sheng Wang, Yang Wu, Heyong Huo, Hang Li, Chunlei Wu, Li An, Bin Tang and Zhenghong Li

*EPJ Web of Conferences*

*Published online: 20 January 2020*

*DOI:*[*https://doi.org/10.1051/epjconf/202022507001*](https://doi.org/10.1051/epjconf/202022507001)

[Design and Optimisation of a Three Layers Thermal Neutron, Fast Neutron and Gamma-Ray Imaging System](https://www.epj-conferences.org/articles/epjconf/abs/2020/01/epjconf_animma2019_07002/epjconf_animma2019_07002.html)

H. Al Hamrashdi, S. D. Monk and D. Cheneler

*EPJ Web of Conferences* ***Volume****225, 2020*

*Published online: 20 January 2020*

*DOI:*[*https://doi.org/10.1051/epjconf/202022507002*](https://doi.org/10.1051/epjconf/202022507002)

[Design and Construction of an Imaging beamline at the Nagoya University Neutron Source](https://www.epj-conferences.org/articles/epjconf/pdf/2020/07/epjconf_ucans82020_05002.pdf) Katsuya Hirota, Shogo Awano, Takuhiro Fujiie, Seiso Fukumura, Mayu Hishida, Go Ichikawa, Sohei Imajo, Ikuya Itoh, Yoshihisa Iwashita, Masaaki Kitaguchi, Yoshiaki Kiyanagi, Yasutoshi Kuriyama, Koki Morikawa, Yudai Niinomi, Hirohiko M. Shimizu, Kazuki Tsuchida, Yusuke Tsuchikwa, Yukio Tsurita, Akira Uritani, Kenichi Watanabe, Yutaka Yamagata, Nana Yamamoto, Atsushi Yamazaki, Sachiko Yoshihashi and Tamaki Yoshioka

*EPJ Web of Conferences 231, 05002 (2020)*

*https://doi.org/10.1051/epjconf/202023105002*

[Scalable Neutron Imaging Systems at Compact Sources](https://www.epj-conferences.org/articles/epjconf/abs/2020/07/epjconf_ucans82020_05006/epjconf_ucans82020_05006.html)

Knud Thomsen\* , Eberhard Lehmann, and Markus Strobl

*EPJ Web of Conferences 231, 05006 (2020)*

[*https://doi.org/10.1051/epjconf/202023105006*](https://doi.org/10.1051/epjconf/202023105006)

[Reconstruction on fast neutron CT for concrete structure inspection with a pixel-type detector by applying linear scanning method](https://www.epj-conferences.org/articles/epjconf/abs/2020/07/epjconf_ucans82020_05008/epjconf_ucans82020_05008.html)

Mingfei Yan, Yasuo Wakabayashi, Yoshie Otake, Yujiro Ikeda, Atsushi Taketani, Takao Hashiguchi, Sheng Wang, Binbin Tian , Takaoki Takanashi, Tomohiro Kobayashi, Baolong Ma

*EPJ Web of Conferences 231, 05008 (2020)*

*DOI: 10.1051/epjconf/202023105008 ISSN: 2100-014X*

[**Frontiers in Ecology and Evolution**](https://www.frontiersin.org/articles/10.3389/fevo.2020.00042/full) **(1)**

[When X-Rays Do Not Work. Characterizing the Internal Structure of Fossil Hominid Dentognathic Remains Using High-Resolution Neutron Microtomographic Imaging](https://www.frontiersin.org/articles/10.3389/fevo.2020.00042/full)

[Clément Zanolli](https://www.frontiersin.org/people/u/798055), [Burkhard Schillinger](https://www.frontiersin.org/people/u/766477), Ottmar Kullmer, Friedemann Schrenk, [Jay Kelley](https://www.frontiersin.org/people/u/898461), [Gertrud E. Rössner](https://www.frontiersin.org/people/u/904863), Roberto Macchiarelli1

*Front. Ecol. Evol., 27 February 2020 |*[*https://doi.org/10.3389/fevo.2020.00042*](https://doi.org/10.3389/fevo.2020.00042)

[**ISIJ International**](https://www.jstage.jst.go.jp/browse/isijinternational)  **(1)**

[Simultaneous Broadening Analysis of Multiple Bragg Edges Observed by Wavelength-resolved Neutron Transmission Imaging of Deformed Low-carbon Ferritic Steel](https://www.jstage.jst.go.jp/article/isijinternational/advpub/0/advpub_ISIJINT-2019-656/_article)

Hirotaka Sato, Kenji Iwase, Takashi Kamiyama and Yoshiaki Kiyanagi

*ISIJ International, DOI: 10.2355/isijinternational.ISIJINT-2019-656*

*Received on October 10, 2019; accepted on November 27, 2019; J-STAGE Advance published date: January 17, 2020*

[**Journal of Colloid and Interface Science**](https://www.sciencedirect.com/journal/journal-of-colloid-and-interface-science) **(1)**

[Imbibition and structure of silica nanoporous media characterized by neutron imaging](http://europepmc.org/article/MED/31982714).

[Léang M](http://europepmc.org/search?query=AUTH:%22Marguerite%20L%C3%A9ang%22), [Ott F](http://europepmc.org/search?query=AUTH:%22Fr%C3%A9d%C3%A9ric%20Ott%22), [Giorgiutti-Dauphiné F](http://europepmc.org/search?query=AUTH:%22Fr%C3%A9d%C3%A9rique%20Giorgiutti-Dauphin%C3%A9%22), [Pauchard L](http://europepmc.org/search?query=AUTH:%22Ludovic%20Pauchard%22), [Lee LT](http://europepmc.org/search?query=AUTH:%22Lay-Theng%20Lee%22)

*Journal of Colloid and Interface Science, 17 Jan 2020, 565:474-482
DOI:*[*10.1016/j.jcis.2020.01.052*](http://doi.org/10.1016/j.jcis.2020.01.052)*PMID: 31982714*

[**Journal of Energy Storage**](https://www.journals.elsevier.com/journal-of-energy-storage) **(1)**

[In-situ neutron imaging study of NH3 absorption and desorption in SrCl2 within a heat storage prototype reactor](https://www.sciencedirect.com/science/article/pii/S2352152X19317311)

Berdiyeva, Perizat; Karabanova, Anastasiia; Makowska, Malgorzata Grazyna

*Journal of Energy Storage, 2020, Vol 29*

*DOI: 10.1016/j.est.2020.101388*

[**Journal of Imaging**](https://doaj.org/toc/2313-433X?source=%7B%22query%22%3A%7B%22filtered%22%3A%7B%22filter%22%3A%7B%22bool%22%3A%7B%22must%22%3A%5B%7B%22terms%22%3A%7B%22index.issn.exact%22%3A%5B%222313-433X%22%5D%7D%7D%2C%7B%22term%22%3A%7B%22_type%22%3A%22article%22%7D%7D%25) **(4)**

[Energy Resolved Neutron Imaging for Strain Reconstruction Using the Finite Element Method](https://www.mdpi.com/2313-433X/6/3/13)

Riya Aggarwal; Michael H. Meylan; Bishnu P. Lamichhane; Chris M. Wensrich

J. Imaging*2020,*6*(3), 13;*[*https://doi.org/10.3390/jimaging6030013*](https://doi.org/10.3390/jimaging6030013)

[On the Genesis of Artifacts in Neutron Transmission Imaging of Hydrogenous Steel Specimens](https://www.mdpi.com/2313-433X/6/4/22)

[Beate Pfretzschner](https://sciprofiles.com/profile/340955), [Thomas Schaupp](https://sciprofiles.com/profile/author/dXA0WFJoNXo3MUxmaDZXQWZISEF1YnNIaGU1Zm1ZcjEwQll6QUkvMjVsND0%3D), [Andreas Hannemann](https://sciprofiles.com/profile/author/b1VFZU1idVNUcnVseHJLWSthNmN3aTJ3RXdRWkd5UmJ6aGxlL0w5dGo0UT0%3D), [Michael Schulz](https://sciprofiles.com/profile/1030999),[Axel Griesche](https://sciprofiles.com/profile/1014303)

J. Imaging 2020, 6(4), 22; <https://doi.org/10.3390/jimaging6040022>

[On a Method For Reconstructing Computed Tomography Datasets from an Unstable Source](https://www.mdpi.com/2313-433X/6/5/35)

[Nicholas Stull](https://sciprofiles.com/profile/797087), [Josh McCumber](https://sciprofiles.com/profile/1067008), [Lawrence D'Aries](https://sciprofiles.com/profile/author/anBLR0hiZGxGR3AvR3BDMmpZemRuNHFRQjVFcHFpZXNBQ21jNy9LUVhtRT0%3D), [Michelle Espy](https://sciprofiles.com/profile/394102), [Cort Gautier](https://sciprofiles.com/profile/author/Ry9GMjlMQWl3d2JHMzdaSnJOOUZLd1FHRzBQNjBQTWdBcTZ2OHp5a3RUaz0%3D), [James Hunter](https://sciprofiles.com/profile/364261)

J. Imaging 2020, 6(5), 35; <https://doi.org/10.3390/jimaging6050035>

[The Reconstruction of a Bronze Battle Axe and Comparison of Inflicted Damage Injuries Using Neutron Tomography, Manufacturing Modeling, and X-ray Microtomography Data](https://www.mdpi.com/2313-433X/6/6/45)

Mar[ia Mednikova](https://sciprofiles.com/profile/1053470%22%20%5Ct%20%22_blank), [Irina Saprykina](https://sciprofiles.com/profile/author/V0xQdnpmNktJbGo1bUZUTys0S2dFUT09), [Sergey Kichanov](https://sciprofiles.com/profile/335125),[Denis Kozlenko](https://sciprofiles.com/profile/author/UXR3b0dIL0lsdEN1TU1EbGw5MnJWdz09)

J. Imaging 2020, 6(*6), 45;*[*https://doi.org/10.3390/jimaging6060045*](https://doi.org/10.3390/jimaging6060045)

[**Journal of the Korean Society of Visualization**](http://www.koreascience.or.kr/journal/GSSGB0.page) **(1)**

[Research for development of our own image processing code for neutron tomography](http://www.koreascience.or.kr/article/JAKO202013965593746.page)

Kim, Jin Man; Kim, TaeJoo; Yu, Dong In

[*Journal of the Korean Society of Visualization*](http://www.koreascience.or.kr/journal/GSSGB0.page)

[*Volume 18 Issue 1*](http://www.koreascience.or.kr/journal/GSSGB0/v18n1.page) *Pages.44-49/2020/1598-8430(pISSN)/2093-808X(eISSN)*

*https://doi.org/10.5407/jksv.2020.18.1.044*

[**Journal of Physics: Conference Series**](https://iopscience.iop.org/journal/1742-6596) **(2)**

Characterization of porosity inside limestone as a reservoir of oil using neutron tomography

B. Bharoto, A. Ramadhani, F. Akbar, S. G. Sukaryo, T. H. Priyanto, M. Kurniati and F. A. Fadhila

J. Phys.: Conf. Ser. *1436* *012007, 2020*[*https://doi.org/10.1088/1742-6596/1436/1/012007*](https://doi.org/10.1088/1742-6596/1436/1/012007)

Ne[utron tomography study of a lithium-ion coin battery](https://iopscience.iop.org/article/10.1088/1742-6596/1436/1/012029)

Yustinus Purwamargapratala, Sudaryanto and dan Fahrurrozi Akbar

J. Phys.: Conf. Ser. *1436 012029, 2020*[*https://doi.org/10.1088/1742-6596/1436/1/012029*](https://doi.org/10.1088/1742-6596/1436/1/012029)

[**Materials**](https://www.mdpi.com/journal/materials) **(1)**

[Neutron Diffraction and Diffraction Contrast Imaging for Mapping the TRIP Effect under Load Path Change](https://www.mdpi.com/1996-1944/13/6/1450)

Polatidis E; Morgano M; Malamud F; Bacak M; Panzner T; Van Swygenhoven H; Strobl M.

Materials*2020,*13*(6), 1450;*[*https://doi.org/10.3390/ma13061450*](https://doi.org/10.3390/ma13061450)

[**Materials Research Proceedings**](https://www.mrforum.com/mrp/) **(47)**

[Volume 15 (2020) pdf](https://www.mrforum.com/product/neutron-radiography/)

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[**Nature Communications**](https://www.nature.com/ncomms/) **(1)**

[4D imaging of lithium-batteries using correlative neutron and X-ray tomography with a virtual unrolling technique](https://www.nature.com/articles/s41467-019-13943-3)

[Ralf F. Ziesche](https://www.nature.com/articles/s41467-019-13943-3#auth-1), [Tobias Arlt](https://www.nature.com/articles/s41467-019-13943-3#auth-2), [Donal P. Finegan](https://www.nature.com/articles/s41467-019-13943-3%22%20%5Cl%20%22auth-3),[Thomas M. M. Heenan](https://www.nature.com/articles/s41467-019-13943-3#auth-4), [Alessandro Tengattini](https://www.nature.com/articles/s41467-019-13943-3#auth-5), [Daniel Baum](https://www.nature.com/articles/s41467-019-13943-3#auth-6), [Nikolay Kardjilov](https://www.nature.com/articles/s41467-019-13943-3%22%20%5Cl%20%22auth-7), [Henning Markötter](https://www.nature.com/articles/s41467-019-13943-3#auth-8), [Ingo Manke](https://www.nature.com/articles/s41467-019-13943-3#auth-9), [Winfried Kockelmann](https://www.nature.com/articles/s41467-019-13943-3#auth-10), [Dan J. L. Brett](https://www.nature.com/articles/s41467-019-13943-3#auth-11) & [Paul R. Shearing](https://www.nature.com/articles/s41467-019-13943-3#auth-12)

[*Nature Communications*](https://www.nature.com/ncomms)*volume 11, Article number: 777 (2020)*

[**Nature Scientific Reports**](http://www.nature.com/srep/) **(1)**

[3D sub-pixel correlation length imaging](https://www.nature.com/articles/s41598-020-57988-7)

R.P.Harti, M. Strobl, J. Valsecchi, J. Hovind, C. Grunzweig

*2020-01 Scientific Reports*

*DOI: 10.1038/s41598-020-57988-7 ISSN: 2045-2322 Volume: 10 Issue: 1 Pages: 1*

**[New Phytologist (1)](https://nph.onlinelibrary.wiley.com/journal/14698137)**

[Differences in grapevine rootstock sensitivity and recovery from drought are linked to fine root cortical lacunae and root tip function](http://europepmc.org/article/MED/32171020)

[Cuneo IF](http://europepmc.org/search?query=AUTH:%22Italo%20F%20Cuneo%22), [Barrios-Masias F](http://europepmc.org/search?query=AUTH:%22Felipe%20Barrios-Masias%22), [Knipfer T](http://europepmc.org/search?query=AUTH:%22Thorsten%20Knipfer%22), [Uretsky J](http://europepmc.org/search?query=AUTH:%22Jake%20Uretsky%22), [Reyes C](http://europepmc.org/search?query=AUTH:%22Clarissa%20Reyes%22), [Lenain P](http://europepmc.org/search?query=AUTH:%22Pierre%20Lenain%22), [Brodersen CR](http://europepmc.org/search?query=AUTH:%22Craig%20R%20Brodersen%22), [Walker MA](http://europepmc.org/search?query=AUTH:%22M%20Andrew%20Walker%22), [McElrone AJ](http://europepmc.org/search?query=AUTH:%22Andrew%20J%20McElrone%22)

*The New Phytologist, 14 Mar 2020,
DOI:*[*10.1111/nph.16542*](http://doi.org/10.1111/nph.16542)*PMID: 32171020*

[**Nuclear Engineering and Technology**](https://www.sciencedirect.com/journal/nuclear-engineering-and-technology/vol/47/issue/6) **(2)**

[Target-Moderator-Reflector system for 10–30 MeV proton accelerator-driven compact thermal neutron source: Conceptual design and neutronic characterization](https://www.sciencedirect.com/science/article/pii/S1738573319305212)

[Byoungil Jeon](https://www.sciencedirect.com/science/article/pii/S1738573319305212#!), [Jongyul Kim, Eunjoong Lee](https://www.sciencedirect.com/science/article/pii/S1738573319305212#!), [Myungkook Moon,](https://www.sciencedirect.com/science/article/pii/S1738573319305212#!) [Gyuseong Cho](https://www.sciencedirect.com/science/article/pii/S1738573319305212#!)

[*Nuclear Engineering and Technology*](https://www.sciencedirect.com/science/journal/17385733)

[*Volume 52, Issue 3*](https://www.sciencedirect.com/science/journal/17385733/52/3)*, March 2020, Pages 633-646*

[*https://doi.org/10.1016/j.net.2019.08.019*](https://doi.org/10.1016/j.net.2019.08.019)

[A novel ceramic GEM used for neutron detection](https://www.sciencedirect.com/science/article/pii/S173857331930912X)

[Jianrong Zhou,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Xiaojuan Zhou,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Jianjin Zhou,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Xingfen Jiang,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Jianqing Yang,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Lin Zhu,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Wenqin Yang,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Tao Yang,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Hong Xu,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Yuanguang Xia,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Gui-an Yang,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Yuguang Xie,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Chaoqiang Huang,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Bitao Hu,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Zhijia Sun,](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21) [Yuanbo Chen](https://www.sciencedirect.com/science/article/pii/S173857331930912X%22%20%5Cl%20%22%21)

[*Nuclear Engineering and Technology*](https://www.sciencedirect.com/science/journal/17385733)

[*Volume 52, Issue 6*](https://www.sciencedirect.com/science/journal/17385733/52/6)*, June 2020, Pages 1277-1281*

[*https://doi.org/10.1016/j.net.2019.11.021*](https://doi.org/10.1016/j.net.2019.11.021)

**[Nuclear Instruments and Methods in Physics Research Section A](https://www.sciencedirect.com/journal/nuclear-instruments-and-methods-in-physics-research-section-a-accelerators-spectrometers-detectors-and-associated-equipment) (7)**

[High spatial resolution cold neutron imaging with new Tb3+/Ce3+ co-doped Gd2O3 scintillation glass fiber arrays](https://www.sciencedirect.com/science/article/pii/S0168900219312653)

De-Yuan Li, Hua Li, Meng-Qing Niu, Cheng-Liang Wan, Xiao-Dong Zhang

[*Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*](https://www.sciencedirect.com/science/journal/01689002)*,*

*Volume 949, 1 January 2020, Article 162829*

[Hydrogenous content identification in heterogeneous cargoes via multiple monoenergetic neutron radiography](https://www.sciencedirect.com/science/article/pii/S0168900219312860)

Jill Rahon, Areg Danagoulian

[*Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*](https://www.sciencedirect.com/science/journal/01689002)*,*

*Volume 949, 1 January 2020, Article 162860*

[The potential of real-time, fast neutron and γ radiography for the characterization of low-mass, solid-phase media](https://www.sciencedirect.com/science/article/pii/S0168900218318205?via%3Dihub)

[M.Licata, M.J.Joyce, I.Tsitsimpelis, D.Clark](https://www.sciencedirect.com/science/article/pii/S0168900218318205?via%3Dihub#!), [B.A.Shippen](https://www.sciencedirect.com/science/article/pii/S0168900218318205?via%3Dihub#!)

[*Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*](https://www.sciencedirect.com/science/journal/01689002)*,*

[*Volume 954*](https://www.sciencedirect.com/science/journal/01689002/954/supp/C)*, 21 February 2020, 161706*

[Design of moderator and collimator for compact neutron radiography systems](https://www.sciencedirect.com/science/article/pii/S0168900220301236?dgcid=raven_sd_via_email#!)

Huanyu Li, Chenyi Zhao, Shuang Qiao, Tian Zhang

*Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment,*

*Volume 959 , 11 April 2020, Article 163535*

NeXT-Grenoble, the Neutron and X-ray tomograph in Grenoble

[Alessandro Tengattini, Nicolas Lenoir, Edward Andò, Benjamin Giroud, Duncan Atkins,](https://www.sciencedirect.com/science/article/pii/S0168900220304198#!) [Jerome Beaucour](https://www.sciencedirect.com/science/article/pii/S0168900220304198#!), [Gioacchino Viggiani](https://www.sciencedirect.com/science/article/pii/S0168900220304198#!)

*Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment,*

[*Volume 968*](https://www.sciencedirect.com/science/journal/01689002/968/supp/C)*, 11 July 2020, 163939*

[First evaluation of fast neutron imaging with LiInSe2 semiconductors](https://www.sciencedirect.com/science/article/pii/S0168900220306501)

[Eric Lukosi,](https://www.sciencedirect.com/science/article/pii/S0168900220306501%22%20%5Cl%20%22%21) [Daniel Hamm,](https://www.sciencedirect.com/science/article/pii/S0168900220306501%22%20%5Cl%20%22%21) [Jeff Preston,](https://www.sciencedirect.com/science/article/pii/S0168900220306501%22%20%5Cl%20%22%21) [Paul Hausladen,](https://www.sciencedirect.com/science/article/pii/S0168900220306501%22%20%5Cl%20%22%21) [Carl Brune,](https://www.sciencedirect.com/science/article/pii/S0168900220306501%22%20%5Cl%20%22%21) [Thomas Massey,](https://www.sciencedirect.com/science/article/pii/S0168900220306501%22%20%5Cl%20%22%21) [Devon Jacobs,](https://www.sciencedirect.com/science/article/pii/S0168900220306501%22%20%5Cl%20%22%21) [Arnold Burger,](https://www.sciencedirect.com/science/article/pii/S0168900220306501%22%20%5Cl%20%22%21) [Ashley Stowe](https://www.sciencedirect.com/science/article/pii/S0168900220306501%22%20%5Cl%20%22%21)

*Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment,*

[*https://doi.org/10.1016/j.nima.2020.*](https://doi.org/10.1016/j.nima.2020.164254) *Available online 10 June 2020, 164254*

[A Monte Carlo evaluation of neutron images quality in a research reactor based neutron radiography facility](https://www.sciencedirect.com/science/article/pii/S0168900220306549)

[H.Jafari, M.H. Choopan Dastjerdi, S. Rajabi Moghadam](https://www.sciencedirect.com/science/article/pii/S0168900220306549#!)

*Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment,*

[*Volume 976*](https://www.sciencedirect.com/science/journal/01689002/976/supp/C)*, 1 October 2020, 164258*

[**PeerJ**](https://peerj.com/articles/8698/) **(2)**

[Postcranial anatomy and histology of *Seymouria*, and the terrestriality of seymouriamorphs](https://peerj.com/articles/8698/)

Bazzana KD, Gee BM, Bevitt JJ, Reisz RR.

*PeerJ* *8:e8698*[*https://doi.org/10.7717/peerj.8698*](https://doi.org/10.7717/peerj.8698) *2020*

[Thecodont tooth attachment and replacement in bolosaurid parareptiles](https://peerj.com/articles/9168/?utm_source=TrendMD&utm_campaign=PeerJ_TrendMD_1&utm_medium=TrendMD)

Snyder AJ, LeBlanc ARH, Jun C, Bevitt JJ, Reisz RR.

*PeerJ* 8:e9168 <https://doi.org/10.7717/peerj.9168> 2020

[**Physical Review**](https://journals.aps.org/pra/)  **(1)**

[Neutron ghost imaging](https://journals.aps.org/pra/abstract/10.1103/PhysRevA.101.053844)

Andrew M. Kingston, Glenn R. Myers, Daniele Pelliccia, Filomena Salvemini, Joseph J. Bevitt, Ulf Garbe, and David M. Paganin

*Phys. Rev. A 101, 053844 – Published 18 May 2020*

[**PLOS One**](https://journals.plos.org/plosone/) **(1)**

[Reconstructing *Krassilovia mongolica* supports recognition of a new and unusual group of Mesozoic conifers](https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0226779)

Fabiany Herrera , Gongle Shi, Chris Mays, Niiden Ichinnorov, Masamichi Takahashi, Joseph J. Bevitt, Patrick S. Herendeen, Peter R. Crane

*Plos One, January 15, 2020,* [*https://doi.org/10.1371/journal.pone.0226779*](https://doi.org/10.1371/journal.pone.0226779)

[**Quantum Beam Science**](https://www.mdpi.com/journal/qubs) **(1)**

[Recent Progress in X-ray and Neutron Phase Imaging with Gratings](https://www.mdpi.com/2412-382X/4/1/9)

[Atsushi Momose](https://sciprofiles.com/profile/933131), [Hidekazu Takano](https://sciprofiles.com/profile/author/UGpxZkxwd080SU4xVEg5RlBqaTNaM2MyRVp3cWJuMEJMakZoZEZNSzZnST0%3D),[Yanlin Wu](https://sciprofiles.com/profile/author/U0V1R1RRdG9kZjhMaVg0TTNkTGZVT0hzUmEyTjRYZmp4TStjbUJQWkRHQT0%3D), [Koh Hashimoto](https://sciprofiles.com/profile/author/ZHgrbGFUNzhUbWxZRmNGUERGZDVkQ2h0TFYxeVFpMWtKeHpOZHhZc0h5UT0%3D),[Tetsuo Samoto, Masato Hoshino](https://sciprofiles.com/profile/author/d3ZpRjAyWGR5bENzVmp1dExWejcrVEJ1TURJTHZSRXBuRXBvbnlmZFFuaz0%3D),[Yoshichika Seki](https://sciprofiles.com/profile/author/VHMwSm9XRko1ME1jcG5UU0ZvTVVrV1VqVU90Z1FDTE5HRUZuV0JHNzZ6OD0%3D%22%20%5Ct%20%22_blank),[Takenao Shinohara](https://sciprofiles.com/profile/author/UG50WWVqakJxSWhmWEFJblU5bmJiQjNIK0V0LzZkNjRqTnZScFJOdUJCWT0%3D)

[Quantum Beam Sci. 2020, 4(1), 9;](https://www.mdpi.com/2412-382X/4/1/9)[*https://doi.org/10.3390/qubs4010009*](https://doi.org/10.3390/qubs4010009)

[**Review of Scientific Instruments**](https://aip.scitation.org/rsi/info/policies) **(5)**

[Focusing and imaging of cold neutrons with a permanent magnetic lens](https://aip.scitation.org/doi/10.1063/1.5116759)

[Jay T. Cremer Jr.](https://aip.scitation.org/author/Cremer%2C%2BJay%2BT%2BJr)*,*[Hanno Filter](https://aip.scitation.org/author/Filter%2C%2BHanno)*,*[Jürgen Klepp](https://aip.scitation.org/author/Klepp%2C%2BJ%C3%BCrgen)*,*[Peter Geltenbort](https://aip.scitation.org/author/Geltenbort%2C%2BPeter)*,*[Charles Dewhurst](https://aip.scitation.org/author/Dewhurst%2C%2BCharles)*,*[Tatsuro Oda](https://aip.scitation.org/author/Oda%2C%2BTatsuro)*,* [Richard H. Pantell](https://aip.scitation.org/author/Pantell%2C%2BRichard%2BH)

*Review of Scientific Instruments 91, 013704 (2020);*[*https://doi.org/10.1063/1.5116759*](https://doi.org/10.1063/1.5116759)

[Development of an experimental setup for in situ visualization of lyophilization using neutron radiography and computed tomography](https://aip.scitation.org/doi/10.1063/1.5126927).

[Hilmer M](http://europepmc.org/authors/%5Bobject%20Object%5D), [Peters J](http://europepmc.org/search?query=AUTH:%22J%C3%BCrgen%20Peters%22), [Schulz M](http://europepmc.org/authors/%5Bobject%20Object%5D), [Gruber S](http://europepmc.org/search?query=AUTH:%22Sebastian%20Gruber%22), [Vorhauer N](http://europepmc.org/search?query=AUTH:%22Nicole%20Vorhauer%22), [Tsotsas E](http://europepmc.org/authors/%5Bobject%20Object%5D), [Foerst P](http://europepmc.org/search?query=AUTH:%22Petra%20Foerst%22)

*Review of Scientific Instruments, 01 Jan 2020, 91(1):014102
DOI:*[*10.1063/1.5126927*](http://doi.org/10.1063/1.5126927)*PMID: 32012547*

[An experimental setup for creating and imaging 4He2 \* excimer cluster tracers in superfluid helium-4 via neutron-3He absorption reaction](https://aip.scitation.org/doi/10.1063/1.5130919)

[Sonnenschein V](http://europepmc.org/authors/%5Bobject%20Object%5D), [Tsuji Y](http://europepmc.org/search?query=AUTH:%22Y%20Tsuji%22), [Kokuryu S](http://europepmc.org/search?query=AUTH:%22S%20Kokuryu%22), [Kubo W](http://europepmc.org/search?query=AUTH:%22W%20Kubo%22), [Suzuki S](http://europepmc.org/search?query=AUTH:%22S%20Suzuki%22), [Tomita H](http://europepmc.org/authors/%5Bobject%20Object%5D), [Kiyanagi Y](http://europepmc.org/search?query=AUTH:%22Y%20Kiyanagi%22), [Iguchi T](http://europepmc.org/search?query=AUTH:%22T%20Iguchi%22), [Matsushita T](http://europepmc.org/authors/%5Bobject%20Object%5D), [Wada N](http://europepmc.org/search?query=AUTH:%22N%20Wada%22), [Kitaguchi M](http://europepmc.org/search?query=AUTH:%22M%20Kitaguchi%22), [Shimizu HM](http://europepmc.org/search?query=AUTH:%22H%20M%20Shimizu%22), [Hirota K](http://europepmc.org/search?query=AUTH:%22K%20Hirota%22), [Shinohara T](http://europepmc.org/authors/%5Bobject%20Object%5D), [Hiroi K](http://europepmc.org/search?query=AUTH:%22K%20Hiroi%22),

[Hayashida H](http://europepmc.org/search?query=AUTH:%22H%20Hayashida%22), [Guo W](http://europepmc.org/search?query=AUTH:%22W%20Guo%22), [Ito D](http://europepmc.org/search?query=AUTH:%22D%20Ito%22), [Saito Y](http://europepmc.org/search?query=AUTH:%22Y%20Saito%22)

*Review of Scientific Instruments, 01 Mar 2020, 91(3):033318
DOI:*[*10.1063/1.5130919*](http://doi.org/10.1063/1.5130919)*PMID: 32259963*

[The energy-resolved neutron imaging system, RADEN](https://aip.scitation.org/doi/10.1063/1.5136034).

[Shinohara T](http://europepmc.org/authors/0000-0003-4432-7681), [Kai T](http://europepmc.org/authors/0000-0002-9892-4556), [Oikawa K](http://europepmc.org/authors/0000-0003-4913-626X), [Nakatani T](http://europepmc.org/search?query=AUTH:%22Takeshi%20Nakatani%22), [Segawa M](http://europepmc.org/search?query=AUTH:%22Mariko%20Segawa%22), [Hiroi K](http://europepmc.org/search?query=AUTH:%22Kosuke%20Hiroi%22), [Su Y](http://europepmc.org/search?query=AUTH:%22Yuhua%20Su%22), [Ooi M](http://europepmc.org/search?query=AUTH:%22Motoki%20Ooi%22), [Harada M](http://europepmc.org/search?query=AUTH:%22Masahide%20Harada%22), [Iikura H](http://europepmc.org/search?query=AUTH:%22Hiroshi%20Iikura%22), [Hayashida H](http://europepmc.org/search?query=AUTH:%22Hirotoshi%20Hayashida%22), [Parker JD](http://europepmc.org/authors/0000-0002-7775-4455), [Matsumoto Y](http://europepmc.org/search?query=AUTH:%22Yoshihiro%20Matsumoto%22), [Kamiyama T](http://europepmc.org/search?query=AUTH:%22Takashi%20Kamiyama%22), [Sato H](http://europepmc.org/authors/0000-0002-1968-7688), [Kiyanagi Y](http://europepmc.org/search?query=AUTH:%22Yoshiaki%20Kiyanagi%22)

*Review of Scientific Instruments, 01 Apr 2020, 91(4):043302
DOI:*[*10.1063/1.5136034*](http://doi.org/10.1063/1.5136034)*PMID: 32357693*

[Sample container for high-resolution neutron imaging of spent nuclear fuel cladding sections](https://aip.scitation.org/doi/full/10.1063/1.5143226)

[Pavel Trtik](https://aip.scitation.org/author/Trtik%2C%2BPavel)*,*[Robert Zubler](https://aip.scitation.org/author/Zubler%2C%2BRobert)*,*[Weijia Gong](https://aip.scitation.org/author/Gong%2C%2BWeijia)*,*[Robin Grabherr](https://aip.scitation.org/author/Grabherr%2C%2BRobin)*,*[Johannes Bertsch](https://aip.scitation.org/author/Bertsch%2C%2BJohannes)*,* [Liliana I. Duarte](https://aip.scitation.org/author/Duarte%2C%2BLiliana%2BI)

*Review of Scientific Instruments 91, 056103 (2020);*[*https://doi.org/10.1063/1.5143226*](https://doi.org/10.1063/1.5143226)

[**Scientific Reports**](https://www.sciencedirect.com/journal/scripta-materialia) **(1)**

[3D sub-pixel correlation length imaging](https://www.nature.com/articles/s41598-020-57988-7)

[R. P. Harti](https://www.nature.com/articles/s41598-020-57988-7#auth-1), [M. Strobl](https://www.nature.com/articles/s41598-020-57988-7#auth-2), [J. Valsecchi](https://www.nature.com/articles/s41598-020-57988-7#auth-3), [J. Hovind](https://www.nature.com/articles/s41598-020-57988-7#auth-4), [C. Grünzweig](https://www.nature.com/articles/s41598-020-57988-7#auth-5)

[*Scientific Reports*](https://www.nature.com/srep)*volume 10, Article number: 1002 (2020)*

[**Scripta Materialia**](https://www.sciencedirect.com/journal/scripta-materialia) **(1)**

[Neutron computed tomography of phase separation structures in solidified CuCo alloys and investigation of relationship between the structures and melt convection during solidification](https://www.sciencedirect.com/science/article/pii/S1359646219305263)

Eita Shoji, Shosei Isogai, Rikuto Suzuki, Masaki Kubo, [TakaoTsukada](https://www-sciencedirect-com.ezproxyd.bham.ac.uk/science/article/pii/S1359646219305263%22%20%5Cl%20%22%21), [Tetsuya Kai](https://www-sciencedirect-com.ezproxyd.bham.ac.uk/science/article/pii/S1359646219305263#!), [Takenao Shinohara](https://www-sciencedirect-com.ezproxyd.bham.ac.uk/science/article/pii/S1359646219305263#!), [Yoshihiro Matsumoto](https://www-sciencedirect-com.ezproxyd.bham.ac.uk/science/article/pii/S1359646219305263#!), [Hiroyuki Fukuyama](https://www-sciencedirect-com.ezproxyd.bham.ac.uk/science/article/pii/S1359646219305263#!)

[*Scripta Materialia*](https://www.sciencedirect.com/science/journal/13596462)*, Volume 175, 15 January 2020, Pages 29-32*

[**Sensors (2)**](https://www.mdpi.com/journal/sensors)

[Neutrons for Cultural Heritage—Techniques, Sensors, and Detection](https://www.mdpi.com/1424-8220/20/2/502)

[Giulia Festa](https://sciprofiles.com/profile/546155), [Giovanni Romanelli](https://sciprofiles.com/profile/932759), [Roberto Senesi](https://sciprofiles.com/profile/779365), [Laura Arcidiacono](https://sciprofiles.com/profile/961250), [Claudia Scatigno](https://sciprofiles.com/profile/author/Y1JLNjhid0Y3RnNhcDVXQlVEdC95Z092YUJRN0U3V04wemJEWUpIeTdCUT0%3D), [Stewart F. Parker](https://sciprofiles.com/profile/385254), [M. P. M. Marques](https://sciprofiles.com/profile/570243),[Carla Andreani](https://sciprofiles.com/profile/author/VEFpT3pmU3JtbVlDaU4wby81MUJHQXJ5a0VpclZ3bU1RcnZpN08ySVVIQT0%3D)

Sensors*2020,*20*(2), 502*; [*https://doi.org/10.3390/s20020502*](https://doi.org/10.3390/s20020502)

[Accelerated Tests on Si and SiC Power Transistors with Thermal, Fast and Ultra-Fast Neutrons](https://www.mdpi.com/1424-8220/20/11/3021)

[Fabio Principato](https://sciprofiles.com/profile/1012475), [Saverio Altieri](https://sciprofiles.com/profile/1062139), [Leonardo Abbene](https://sciprofiles.com/profile/23625), [Francesco Pintacuda](https://sciprofiles.com/profile/author/b2hLZVpncWRhTHB6SkJ3N2dWN1N5cU1GN1JhNXhySE5IYmFidVNmRVNmQT0%3D)

Sensors 2020, 20*(11), 3021;*[*https://doi.org/10.3390/s20113021*](https://doi.org/10.3390/s20113021)