

## HTM Journal of Heat Treatment and Materials



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## Scope and general policies of the journal

### Scope

The *HTM* is a bilingual (German-English) independently assessed and periodical standard publication that provides reports on all aspects of heat treatment and material technology in research and production. By publishing trend-setting contributions to research and practical experience reports, the *HTM* helps in answering scientific questions as well as regarding investment decisions in the industry. All articles are subject to thorough, independent peer review.

The *HTM* publishes six issues per volume in print and online (Feb/Apr/Jun/Aug/Oct/Dec).

The *HTM* is the official organ of AWT – Arbeitsgemeinschaft Wärmebehandlung und Werkstofftechnik e.V.

### Article (manuscript) categories

- Research Article
- Technical Article

The general requirements for submissions of articles are as follows:

#### **For a Research Article (scientific paper):**

- corresponds to the subject area of *HTM*,
- contains new and previously unpublished content,
- meets the standard of *HTM* in terms of approach, state of knowledge, results and conclusions,
- contains at least five references to renowned sources/references.

#### **For a Technical Article (technical-industrial paper):**

- concerns *HTM* focus topics and related fields,
- technical objective,
- state of the art,
- solution approach (new plant technology, etc.),
- results obtained with the new technical solution,
- discussion of the results in comparison with the state of the art,
- contains generally usable information (no predominant advertising literature),
- contains at least five references to renowned sources/references.

### Submissions in the following fields are welcome:

Annealing process  
Case hardening  
Component testing  
diffusion processes  
Electromagnetic rays  
Fixture hardening  
Hardening and tempering  
Induction hardening  
Laser hardening  
Material and component properties  
Measuring and testing technology  
Modern firing technology  
Numerical Simulation  
Press hardening  
Process optimization  
Quenching  
Safety engineering  
Straightening processes  
Surface technologies  
Temperature technology  
Thermo chemical

Automation  
Component cleaning  
Defects and damage during heat treatment  
Dimensional and shape change  
FE simulation  
Gas nitriding  
Heat treatment of tool steel  
Integration of heat treatment into manufacturing  
Machinery and plant technology  
Material and heat treatment  
Microstructure of metals  
Nitrocarburizing  
Plasma nitriding  
Process chain influences on heat treatment  
Properties of steels applications  
Residual stress and distortion development  
Sensor technology  
Surface hardening  
Technologies for different application processes  
Testing of the heat treated condition  
Vacuum hardening

## Peer review, turnaround times and preprint policies

### Peer review information

The *HTM* is a single-blind journal. Manuscripts are reviewed by at least two independent reviewers selected by the Editorial Office. The authors may provide the names, institution, country and e-mail addresses of potential reviewers. Reviewers indicated by the authors must be of institutions different from those of any of the authors.

The editors reserve the right to reject submitted manuscripts without peer review if the studies are not novel or important enough to merit publication in the journal. Manuscripts deemed unsuitable (insufficient originality or limited interest to the target audience) will be also rejected without review.

### Turnaround time

The *HTM* aspires to inform authors of the peer review decision within 4–5 weeks from submission date. Revised manuscripts should be returned within 10 days (minor revision)/18 days (major revision).

### Rejection of manuscripts

Manuscripts dealing with subjects that have been well studied in the literature, and that do not resolve questions raised by previous studies, or manuscripts that are statistically underpowered, are likely to be rejected without peer review.

Reporting of negative results must be justified by prior evidence that a positive result would be expected. Manuscripts are also returned to authors if they do not comply with the Instructions for Authors.

### Appeals

Manuscripts that have been rejected for publication will be reconsidered only at the discretion of the Editor(s). Authors wishing to request reconsideration of a previously rejected manuscript must do so in written form and submit a rebuttal by e-mail to the journal's editorial office. Authors should provide detailed reasons why they believe the manuscript should be reconsidered. If the rebuttal is accepted, the author will be asked to re-submit the manuscript.

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De Gruyter does not consider the following purposes of a paper as pre-publication: publication in the form of a congress abstract, publication as an academic thesis, publication as an electronic preprint on recognized servers such as arXiv, RePEc, bioRxiv, ResearchSquare, etc.

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Inclusive language recognizes diversity, conveys respect for all people, is sensitive to differences and promotes equal opportunities. Content should not make assumptions about readers' beliefs or commitments; should not contain anything that might suggest that one person is superior to another because of age, gender, race, ethnicity, culture, sexual orientation, disability or health condition; and should use inclusive language throughout. Authors should ensure that their writing is free from prejudice, stereotypes, slang, references to the dominant culture and/or cultural assumptions.

We advise the following approach: Aim for gender neutrality by using plural nouns (clinicians, clients, participants) as standard and avoiding "he" or "she", wherever possible. Instead, please use "they". We recommend avoiding the use of descriptors that refer to personal characteristics such as age, gender, race, ethnicity, culture, sexual orientation, disability or health status unless they are relevant and valid.

## Submission of manuscripts

- Submit manuscripts exclusively online at: <https://mc.manuscriptcentral.com/htm>

You will be guided through the whole submission process in ScholarOne Manuscripts System.

We strongly recommend the authors register with institutional e-mail addresses, and refrain from using private e-mail addresses. A cover letter may be submitted for each manuscript upon first submission. It should contain a brief statement by the authors as to the element of novelty upon which they base their request for publication in the *HTM*. Please address the cover letter to the Editor-in-Chief. Revised manuscripts must be accompanied by a point-by-point reply to the reviewers' criticisms. Major changes in the revised manuscript must be highlighted, preferably in tracked changes mode.

## ORCID

The ORCID (Open Researcher and Contributor ID) is a non-profit, publisher-independent system that is used to uniquely identify academics and their publications. Click [here](#) for detailed information about ORCID. Submitting authors can login with username and password. If the journal uses ScholarOne as submission tool, authors can also login with their ORCID number. Providing an ORCID number for each author is strongly recommended. ORCID numbers should be listed on the title page.

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## Post-acceptance

### Galley proofs

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Proofs are relevant only with respect to the composed type, not for the quality of paper or printing.

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## Acknowledgments

Authors may wish to acknowledge individuals, working groups, institutions, etc. who provided help and support (other than financial) during research and the preparation of the manuscript (e.g., language checking, writing assistance or proof reading of the article, etc.). Individuals acknowledged are not included on the title page, as a footnote to the title or otherwise.

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## Informed consent

The [Protection of Privacy](#) is a legal right that must not be infringed without individual informed consent. In cases where the identification of personal information is necessary for scientific reasons, authors should obtain full documentation of informed consent, including written permission from the patient or their legal guardians prior to inclusion in the study. The following (or similar) statement should be given in the Methods section: *Informed consent was obtained from all individuals included in this study*.

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contribution and approve of the final version. **Honorary authorship is not allowed.**

Individuals who helped or participated in certain substantive aspects of the project or work (e.g., technical services staff), but whose contributions were not of sufficient extent to be listed as co-authors, should be appropriately acknowledged, usually in an Acknowledgements section.

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HTM requires authors to follow our [Data Sharing Policy](#), which must comply with the European GDPR (*General Data Protection Regulation*) rules. Research data should be made widely available to the research community to demonstrate the robustness and validity of the research presented in the journal, to enable and encourage replication of the results, and to allow the community with opportunities to learn.

By publishing in the journal, authors are required to provide a data availability statement (DAS) in their articles. The DAS confirms the presence or absence of shared data. The DAS should include information on where the data supporting the findings reported in the article can be found, including, if applicable, hyperlinks to publicly archived datasets analyzed or generated during the study. If research data are not publicly available, this must be stated in the manuscript, as well as the conditions for accessing the data.

Authors are encouraged to share their data but are not required to do so. The decision to publish will not be affected by whether or not authors share their research data.

The DAS should be included either before the References or in the [Template for Ethical and Legal Declarations](#), which is required for submission.

## Preparation of manuscript

### Title page information

Please provide the following information on the first page of your manuscript during the submission process:

- Authors names

Write at least one given and family name in full. For all other names, initial is sufficient. List authors in the order you want them to appear in the final version. Indicate the corresponding author by using an asterisk “\*” after the family name. Please note that as per De Gruyter policy, no author list changes are permitted after acceptance of a manuscript.

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Provide a descriptive, concise and comprehensible main title as well as an abbreviated form of the main title (running head) with no more than 75 characters (including blanks). The short title will be displayed on the top of each page of the final version. A subtitle is permitted.

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In case the content of your article has been presented as a lecture on a conference/congress, please add an asterisk to the title stating the title, place and date of said congress/conference.

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For all authors please supply the following details: academic degree, company/institute with company/institute name and address (street, city, postal code, country), e-mail address (for the corresponding author).

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### Language

All manuscripts must be written in clear and concise German, American or British English. Please use British or American English consistently. If you have reasons to doubt your proficiency with respect to spelling, grammar, etc. (e.g., because German or English is not your native language), then you may wish to employ—at your expense—the services of a professional language editor organized by the authors. The translation to the second language can be managed via the Editorial Office or the authors. Please note that German translations can be proofread by the Editorial Office whereas the proofreading of the English translations need to be arranged for by the authors.

### General format and manuscript elements

Please draft your manuscript with a word processing program (not LaTeX).

**The text must be written as a continuous text with no manual returns and no automatic word division, please set the line spacing to one and a half.**

The length for Research and Technical Articles should be about 6–10 non-typeset pages with a maximum of 12 figures/tables (in total).

A numbered structure (example: Abstract – Keywords – 1 Introduction – 2 Schedule of experiments – 3 Experiments – 4 Results – 5 Conclusions – 6 Summary) is required.

Please use the technical terms listed in the European Standard DIN EN ISO 4885:2018-07, „Eisenwerkstoffe – Wärmebehandlung – Begriffe“ (Ferrous materials – Heat treatments – Vocabulary (ISO 4885 : 2018); Matériaux



ferreux – Traitements thermiques – Vocabulaire (ISO 4885 : 2018)), physical quantities are to be presented in international units as listed in DIN 1304 and DIN 1301 (SI units).

Please see the [Manuscript Checklist](#) for detailed information on length and structure of specific article types.

The general requirements for submissions of articles are as follows:

**For a Research Article (scientific paper):**

- corresponds to the subject area of *HTM*,
- contains new and previously unpublished content,
- meets the standard of *HTM* in terms of approach, state of knowledge, results and conclusions,
- contains at least five references to renowned sources/references.

**For a Technical Article (technical-industrial paper):**

- concerns *HTM* focus topics and related fields,
- technical objective,
- state of the art,
- solution approach (new plant technology, etc.),
- results obtained with the new technical solution,
- discussion of the results in comparison with the state of the art,
- contains generally usable information (no predominant advertising literature),
- contains at least five references to renowned sources/references.

### Abstract

Give a concise summary of your article in an abstract of approx. 200 words in a single paragraph including include the most important prerequisite conditions, objectives and results of the work. As abstracts are published separately by abstracting and indexing services, please spell out abbreviations at first use and do not include footnotes, tables, figures, equations or references.

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Keywords are used by abstracting and indexing services as well as search engines to facilitate finding your paper. Together with the abstract of your paper, they are a key tool enabling readers to find your paper and for increasing citations.

Supply at least 5 specific keywords in lower case, separated by comma.

These can be single words, but also short phrases representing the content. Make sure to select precise and concise keywords to your field or sub-field of research. Avoid abbreviations and the repetition of words already used in the article's title.

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Your manuscript should be subdivided into sections (and, if necessary, subsections). These sections should be labeled with headings in a consistent format (Arabic numerals) and with a clear hierarchy of section headings. Limit your subsections to a maximum of four levels. For subdivided sections ensure that they have at least two subheadings on one level. Headings do not have an end period.

### References

The reference style for the *HTM* is **ACS numbered**.

Literature references to other papers, books, etc. should be numbered consecutively starting at the beginning of the article. Use square brackets (e. g. Smith [1], according to recent theories [2–7]) and list the reference by number (without brackets) in the reference list.

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Articles from periodicals are to be cited using the following sequence: Author(s) last name, abbreviated first name: Title of the cited article. Title of the periodical volume (year) issue number, page number(s), DOI.

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If available, DOI (digital object identifier) numbers or ISBN should be added to references.

In the case of patents, in addition to the country, the patent number and the date filed, the inventor(s) and applicant are to be stated.

#### Examples:

##### Journal

1. Waldeck, S.; Castens, M.; Riefler, R.; Frerichs, F.; Lübken, T.; Fritsching, U.: Mechanisms and Process Control for Quenching with Aqueous Polymer Solutions. HTM J. Heat Treatm. Mat. 74 (2019) 4, pp. 238–256, DOI: 10.3139/105.110387

##### Book

2. Beswick, J. M. (Ed.): Bearing Steel Technology – Advances and State of the Art in Bearing Steel Quality Assurance, 7th Volume. STP1465, ASTM International, West Conshohocken, PA, USA, 2007, DOI: 10.1520/stp1465-eb

##### Thesis

3. Merkel, J.: Untersuchungen zum Einfluss von Kugelstrahl- und Festwalzbehandlungen auf den Randschichtzustand und die Schwingfestigkeit von Sintereisenwerkstoffen. Dissertation, Universität Karlsruhe, 2008

##### Proceedings

4. Reich, M.; Milkereit, B.; Krawutschke, M.; Kalisch, J.; Schick, C.; Kessler, O.: Advanced dilatometry and calorimetry for the validation of materials mechanical and transformation models. Proc. 2nd World Congr. on Integrated Computational Materials Engineering, 07.-11.07.13, Salt Lake City, USA; M. Li, C. Campbell, K. Thornton, E. Holm, P. Gumbsch (Hrsg.), 2013, pp. 177-182, DOI: 10.1002/9781118767061.ch28

##### Standard

5. DIN EN 10216-2 : 2007-10: Nahtlose Stahlrohre für Druckbeanspruchungen. Teil 2: Rohre aus unlegierten und legierten Stählen mit festgelegten Eigenschaften bei erhöhten Temperaturen. Beuth, Berlin, 2007

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Please label the illustrations as “Figure”. **Each figure should be uploaded separately as .jpg, .eps, .png, .tiff or PDF file.** Images should have a minimum resolution of 300 dpi (color or black-white pixel graphics/half-tone images) in the intended size (600dpi combination of pixel graphic and line drawing, 1000dpi for line drawings). When drawing bar graphs, use patterning/color instead of grey scales (faint shading may be lost upon reproduction). Figures should not display any frames.

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This is the main caption. a) This is part figure caption a, b) this is part figure caption b.

The axes of graphs must be labeled, dimensions to be shown at the upper left and lower right between the numbers (German Standard DIN 461: „Graphische Darstellung in Koordinatensystemen“, Graphic Representation in Coordinate Systems).

Use consistent and only essential labeling in graphs (remove all unnecessary text).

The key to the symbols depicted in the figures should be included in the figure itself, where possible. Otherwise, include it in the caption. The caption itself should not be included in the figure.

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