

Editor-in-Chief

Prof. Dr.-Ing. Thomas Böllinghaus

Associate EditorsProf. Dr. M. Hentschel,
Dr. rer. nat. et Ing. habil. G.-R. Jaenisch,
Prof. Dr.-Ing. Th. Kannengießer,
Dr.-Ing. A. Hofmann-Böllinghaus**Journal Management**Stefanie Hentze
Tel. +49 89 76 902-276
Fax +49 89 76 902-491
E-mail: stefanie.hentze@degruyter.com**Media Sales**Markus Kügel
Tel. +49 89 76 902-424
E-mail: markus.kuegel@degruyter.com**DE GRUYTER**Walter de Gruyter GmbH
Genthiner Straße 13
10785 Berlin
Germany
www.materialstesting.de
www.degruyter.com**ARTICLES**

- F. Zhu, X. Gu, P. Bai and D. Lei* 303
Application of 3D digital image correlation for the measurement of the tensile mechanical properties of high-strength steel
- S. Backens, J. Siering, S. Schmidt, N. Glück and W. Flügge* 311
Comparative study of thermoplastic liner materials with regard to mechanical and permeation barrier properties before and after cyclic thermal aging
- Y. Polsen, P. Wangyao, N. Chuankrerkkul, P. Visuttipitukul, R. Tongsri and G. Lothongkum* 317
Oxidation Behavior at 1173 K of Modified P/M Stainless Steel 316 L by Addition of Cr, Ni, and Cr with Ni
- Y. E. Erdođdu, E. E. Korkmaz and Ş. Temiz* 322
Effect of graphene nanoplatelet filling on mechanical properties of natural fiber reinforced polymer composites
- A. S. Sener* 329
Fatigue life evaluation of an electrically driven shuttle frame using finite element analysis
- B. S. Yıldız, V. Patel, N. Pholdee, S. M. Sait, S. Bureerat and A. R. Yıldız* 336
Conceptual comparison of the ecogeography-based algorithm, equilibrium algorithm, marine predators algorithm and slime mold algorithm for optimal product design
- M. O. Kaman, N. Celik and R. Das* 341
Thermo-mechanical analysis of a FGM plate subjected to thermal shock – A new numerical approach considering real time temperature dependent material properties
- M. Ayvaz and H. Cetinel* 350
Mechanical properties of Al-Cu/B₄C and Al-Mg/B₄C metal matrix composites
- B. S. Yıldız, N. Pholdee, S. Bureerat, M. U. Erdaş, A. R. Yıldız and S. M. Sait* 356
Comparison of the political optimization algorithm, the Archimedes optimization algorithm and the Levy flight algorithm for design optimization in industry
- U. Elaiyarsan, V. Satheshkumar and C. Senthilkumar* 360
Surface modification of a magnesium alloy by electrical discharge coating with a powder metallurgy electrode
- S. O. Yilmaz, T. Teker and H. Eker* 368
Characterization of mechanically alloyed Fe based and MoNiAl+Al₂O₃ reinforced composites
- R. M. Government, E. T. Okeke, J. Thaddaeus, A. K. Ani and O. D. Onukwuli* 373
Optimization of flexural and impact properties of r-LDPE-DPWF composite for printer parts production
- B. Wang, F. Islam and G. W. Mair* 379
Evaluation methods for estimation of Weibull parameters used in Monte Carlo simulations for safety analysis of pressure vessels
- A. Sagbas, F. Gürtuna and U. Polat* 386
Comparison of ANN and RSM modeling approaches for WEDM process optimization

MASTHEAD

393

Materials Testing

Materialprüfung

Editorial Board/Beirat

Prof. Dr. Suresh **Babu**
University of Tennessee, Oak Ridge National Laboratory, USA

Dr.-Ing. Manfred **Bacher-Höchst**
Robert Bosch GmbH, Stuttgart, Germany

Dr.-Ing. Martin **Brune**
Chair DVM, Germany

Prof. Dr. Y. Frank **Chen**
The Pennsylvania State University, Middletown, PA, USA

Prof. Dr. Carl E. **Cross**
Estes Park, Colorado, USA

Prof. Dr. Dan **Eliezer**
Ben Gurion University of the Negev, Israel

Prof. Dr.-Ing. Norbert **Enzinger**
TU Graz, Austria

Prof. Dr.-Ing. G. **Lonthongkum**
Chulalongkorn University, Bangkok, Thailand

Prof. Dr.-Ing. Peter **Mayr**
TU Munich, Germany

Prof. Dr.-Ing. Andreas **Neidel**
Siemens / TU Berlin, Germany

Dr. Matthias **Purschke**
DGZfP, Germany

Dr.-Ing. Hans-Jürgen **Schäfer**
VDI Materials Engineering, Germany

Prof. Dr.-Ing. Peter **Starke**
University Saarland, Germany

Prof. Dr.-Ing. Frank **Walther**
TU Dortmund, Germany

Prof. Dr. Ali Riza **Yildiz**
Uludag University, Bursa, Turkey

Editing Institutions/Herausgeber

DGZfP

Deutsche Gesellschaft für zerstörungsfreie Prüfung

German Society for Non-Destructive Testing

DVM

Deutscher Verband für Materialforschung und -prüfung

German Association for Materials Research and Testing

VDI-Materials Engineering

VDI, Gesellschaft Werkstofftechnik

Associate Editors/Redaktion

Prof. Dr.-Ing. Th. Böllinghaus (Editor-in-Chief)

Prof. Dr. Manfred Hentschel

Dr.-Ing. Anja Hofmann-Böllinghaus

Dr. rer. nat. et Ing. habil. Gerd-Rüdiger Jaenisch

Prof. Dr.-Ing. Thomas Kannengiesser

Submission of manuscripts

Manuscripts should be submitted to the Editor-in-Chief

Prof. Dr.-Ing. Th. Böllinghaus, mt@degruyter.com

Indexed in/Gelistet in

Science Citation Index Expanded®

<http://science.thompsonreuters.com>

All articles are peer-reviewed