

## List of scientific publications

### **Books**

1. Madej L., Development of the modeling strategy for the strain localization simulation based on the Digital Material Representation. AGH University Press, 2010.
2. Pietrzyk M., Madej L., Rauch L., Szeliga D., Computational Materials Engineering: achieving high accuracy and efficiency in metals processing simulations, Butterworth-Heinemann Elsevier, 2015.
3. Madej L., Wykorzystanie modeli wirtualnych mikrostruktur w inżynierii metali, Wydawnictwa AGH, 2017.

### **Book chapters**

1. Madej L., Hodgson P.D., Pietrzyk M., Multi scale analysis of material behavior during deformation processes, in: Foundation of Materials Design, eds., Krzysztof J. Kurzydłowski, Bogusław Major and Paweł Zieba, Research Signpost, Kerala, 2006, 17-47.
2. Pietrzyk M., Madej L., Szeliga D., Kuziak R., Pidvysotskyy V., Paul H., Wajda W., Rheological models of metallic materials, Metalurgia 2006, 325-364.
3. Grosman F., Madej L., Ziółkiewicz S., Nowak J., The new incremental forming process, Metalurgia 2010, 223 - 241.
4. Banet E., Baster B., Duda J., Gaweł B., Jankowski R., Jędrusik S., Macioł P., Macioł A., Madej L., Nowak J., Paliński A., Paradowska W., Pilch A., Puka R., Rębiasz B., Stawowy A., Śliwa Z., Wrona R., Zarządzanie regułami biznesowymi: perspektywy zastosowania w zarządzaniu technologią, pod red. Andrzeja Macioła i Adama Stawowego, Akademia Górniczo-Hutnicza im. Stanisława Staszica, 2011.
5. Madej L., Sitko M., Parallelization of the Monte Carlo static recrystallization model, Lecture Notes in Computer Science, 2014, 8500, 445–458.
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### **Impact factor publications (thomson scientific)**

1. Gawad J., Kuziak R., Madej L., Szeliga D., Pietrzyk M., Identification of rheological parameters on the basis of various types of compression and tension tests, Steel Research International, 2/3, 2005, 131-137 (IF 0.345).
2. Madej L., Talamantes-Silva J., Howard I.C., Pietrzyk M., Modeling of the initiation and propagation of the shear band using the coupled CAFE model, Archives of Metallurgy and Materials, 2005, 563-573 (IF 0.179).
3. Madej L., Hodgson P.D., Pietrzyk M., Multi scale rheological model for discontinuous phenomena in materials under deformation conditions, Computational Material Science, 38, 685-691 2007 (IF 1.135).
4. Pietrzyk M., Madej L., Kuziak R., Multi scale CAFE simulation of the multi step cold forging operations, Steel Research International, 78, 2007, 771-776 (IF 0.345).
5. Madej L., Hodgson P.D., Pietrzyk M., The validation of a multi scale rheological model of discontinuous phenomena during metal rolling, Computational Materials Science, 41, 2007, 236-241 (IF 1.135).

6. Pietrzyk M., Madej L., Węglarczyk S., Tool for optimal design of manufacturing chain based on metal forming, *The CIRP Annals*, 2008, 57/1, 309-312 (IF 1.123).
7. Rauch L., Madej L., Węglarczyk S., Pietrzyk M. System for design of the manufacturing process of connecting parts for automotive industry, *Archives of Civil and Mechanical Engineering*, 2008, 8, 157–165 (IF 0.1).
8. Gawad J., Paszyński M., Matuszyk P., Madej L., Cellular automata coupled with hp-adaptive Finite Element Method applied to simulation of austenite-ferrite phase transformation with a moving interface, *Steel Research International*, 79, 2008, 579–586 (IF 0.344).
9. Rauch L., Madej L., Deformation of the dual phase material on the basis of digital representation of microstructure, *Steel Research International*, 79, 2008, 579–586 (IF 0.344).
10. Węglarczyk S., Madej L., Hanarz R., Bochniak W., Szyndler R., Korbel A., Validation of the numerical simulation of forging of gear-wheel in the reversible rotating die, *Steel Research International*, 79, 2008, 789–796 (IF 0.344).
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12. Madej L., Rauch L., Yang C., Strain distribution analysis based on the digital material representation, *Archives of Metallurgy and Materials*, 54, 2009, 499-507 (IF 0.187).
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14. Rauch L., Madej L., Application of the automatic image processing in modelling of the deformation mechanisms based on the digital representation of microstructure, *International Journal for Multiscale Computational Engineering*, 8, 2010, 343-356 (IF 0.768).
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16. Madej L., Szeliga D., Sztangret L., Pietrzyk M., Validation of parameters of cellular automata finite element model dedicated to strain localization phenomena, *Steel Research International*, 81, 2010, 1426 – 1429 (IF 0.455).
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25. Sieradzki L., Madej L., A perceptive comparison of the cellular automata and Monte Carlo techniques in application to static recrystallization modeling in polycrystalline materials, Computational Materials Science, 67, 2013, 156–173 (IF 1.879).
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33. Szyndler J., Madej L., Effect of number of grains and boundary conditions on digital material representatio deformation under plane strain, Archives of Civil and Mechanical Engineering, 14, 2014, 360-369 (IF 1.793).

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#### **Publications in other national and international journals**

1. Madej L., Pietrzyk M., Analysis of possibilities of modeling of material behavior during hot plastic deformation, *Metallurgy and Foundry Engineering*, special edition, 2001, 143-149.
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