Tel.: (012) 2952826

e-mail: l.rogal@imim.pl

Employment and positions

Institute of Metallurgy and Materials Science, Polish Academy of Sciences: assistant professor.

Scientific career

M.Sc.: Cracow, Faculty of Foundry Engineering, AGH University of Science and Technology 2008

Ph.D.: Institute of Metallurgy and Materials Science, Polish Academy of Sciences, 2013

Scientific achievements

The most relevant publications during last 5 years:

1.

Ł. Rogal, J. Dutkiewicz, Deformation behavior of high strength X210CrW12 steel after semi-solid processing, Material Science and Engineering A, 603: 93-97, 2014.

2.

Ł. Rogal, J. Dutkiewicz, Mechanical properties and corrosion resistance of X210CrW12 steel after semi-solid processing and heat treatment, Materials Characterization, 88 (2014) 100-110

3.

Ł. Rogal, Odkształcenie plastyczne jako droga do mikrostruktury globularnej w stopach aluminium, magnezu i stal narzędziowej, Polska Metalurgia w Latach 2011-2014, str. 921-935.

4.

Ł. Rogal, G. Korpala, J. Dutkiewicz, Evolution of microstructure in 100Cr6 steel after cooling from a thixoforming temperature to bainitic transformation ranges, Materials Science and Engineering: A, 624: 291-299, 2015.

5.

Ł. Rogal, F. Czerwiński, L. Litynska-Dobrzyńska, P. Bobrowski, A. Wierzbica-Miernik, J, Dutkiewicz , Effect of Hot Rolling and Equal-Channel Angular Pressing on Generation of Globular Microstructure in Semi-Solid Mg-3% Zn Alloy, Solid State Phenomena,;217: 381-388, 2015

6.

J. Dutkiewicz, J. Głownia, **Ł Rogal** , Preparation of Globular Microstructure in H18 Steel for Semi Solid Processing with the Use of Boron Addition, Solid State Phenomena, 217: 8-14, 2015.

7.

Ł. Rogal, Odlewanie tiksotropowe - nowoczesna technologia wytwarzania zaawansowanych materiałów konstrukcyjnych, Mechanik, 12: 19-22, 2015.

8.

Ł Rogal, W Solano-Álvarez, Z Szklarz, H Bhadeshia, Feasibility study for thixioforming nanostructure bainitic steels, Materials Science and Engineering: A, 651: 708-719, 2016.

9.

Ł. Rogal, J. T. Bonarski, P. Bobrowski, Effect of Tempering and strain on decomposition of metastable austenite in X210CrW12 thixo-cast steel, Journal of Materials Engineering and Performance, 25/3: 845-852, 2016.

10.

Ł. Rogal, W. Solano-Alvarez, H. Bhadeshia, Melt-spinning and semi-solid processing of superbainitic steel, Materials Science and Technology, 33/7: 870-878, 2017.

11.

Ł. Rogal, Semi-solid processing of the CoCrCuFeNi high entropy alloy, Materials and Design 119: 2017 406-416, 2017.

12.

Ł. Rogal, Opportunities in Developing Semi-Solid Processing: Aluminum, Magnesium, and High-Temperature Alloys, Materials Science and Technology, 33/ 7: 759-764, 2017.

13.

Z. Szklarz, M. Bisztyga, H. Krawiec, **Ł. Rogal**, Corrosion behavior of ZE41A magnesium alloy after thixoforming process and heat treatments", Applied Surface Science, 405: 529-539, 2017.

14.

K. Sołek, **Ł. Rogal**, P. Kapranos, Evolution of Globular Microstructure and Rheological,

Properties of Stellite21 Alloy after Heating to Semisolid, Journal of Materials Engineering and Performance, 26: 115-123, 2017.

15.

Ł. Rogal, On the microstructure and mechanical properties of the AlCoCrCuNi high entropy alloy processed in the semi-solid state, Materials Science and Engineering: A,707:139-151, 2017.

16.

J. Dutkiewicz, **Ł. Rogal**, P. Fima, P. Ozga, Composites strengthened with graphene platelets formed in semi-solid state based on α and α/β MgLiAl alloys, Journal of Materials Engineering and Performance, przyjeta do druku dn 07.02.2018.

17.

Ł. Rogal, P. Bobrowski, A. Tarasek, D. Kalita, F. Czerwinski, Effect Of SiC Nano-Particles On Microstructure And Mechanical Properties Of The CoCrFeMnNi High Entropy Alloy, Journal of Alloys and Compounds, 708: 344-352, 2017.

18.

Ł. Rogal, D. Kalita, L. Litynska-Dobrzynska, CoCrFeMnNi High Entropy Alloy Matrix Nanocomposite With Addition Of AL2O3, Submitted to Intermetallics, 86: 104-109, 2017.

19.

Ł. Rogal, P. Bobrowski, F. Körmann, S. Divinski, F. Stein, B. Grabowski, Computational engineering of sublattice ordering in a hexagonal AlHfScTiZr high entropy alloy, Scientific Report, 7: 2017.

20.

Ł. Rogal, F. Czerwinski, P.T. Jochym, L. Litynska-Dobrzynska,, Microstructure and mechanical properties of the novel Hf25Sc25Ti25Zr25 equiatomic alloy with hexagonal solid solutions, Materials and Design, 92:8-17, 2016.

21.

Ł. Rogal, J. Morgiel, Z. Światek, F. Czerwiński, Microstructure and mechanical properties of the new Nb25Sc25Ti25Zr25 eutectic high entropy alloy, Materials Science and Engineering A, 651:590-597, 2016.

22.

J. Dutkiewicz, **Ł. Rogal**, W. Wajda, A. Kukuła-Kurzyniec, C. Coddet, L. Dembinski, Aluminum Matrix Composites Strengthened with CuZrAgAl Amorphous Atomized Powder Particles, Journal of Materials Engineering and Performance, 624: 291-299, 2015.

23.

M. Mitka, A. Goral, **Ł. Rogal**, L. Lityńska-Dobrzynska, Microstructure of mechanically alloyed and annealed Al62Cu25.5Fe12.5 powder, Journal of Alloys and Compounds, 653: 47-53, 2015.

24.

J. Dutkiewicz, M. Szutkowska, W. Leśniewski, P. Wieliczko, A. Pieczara, **Ł. Rogal** ,The effect of TiC on structure and hardness of Wc-Co composites prepared using various consolidation methods, Composites Theory and Practice, 14/2: 91-95, 2014.

Patents:

1) No 227684, High manganese cast iron with globular microstructure, Ł. Rogal, J. Dutkiewicz, J. Głownia, Grzegorz Tęcza

2) No 228007. Set cutting tool and method of making a cutting tool set" Ł. Rogal, J. Dutkiewicz, G. Tęcza, J. Głownia.

Research projects:

-

NCBiR, No LIDER/007/151/L-5/13/NCBR/2014, Development of innovative technology of forming from semi-solid state of new generation magnesium alloys and magnesium based nano-composites - project manager, 2015-2018.

-

MNiSW, Iuventus Plus IV, No IP0400/IP2/2015/73, Effect of Al2O3 and SiC nanoparticles on the microstructure and mechanical properties of high entropy alloys - project manager, 2016-2017

-

NCN, SONATA, No 2014/15/D/ST8/02638, Development of new high entropy alloys with dominant content of hexagonal solid solutions - project manager, 2016-2018

Experienced gained abroad:

University of Cambridge, Department of Materials Science & Metallurgy, Phase Transformations Group" 25.09. -24.10.2015

CANMET-MATERIALS, Natural Resources Canada Ontario, Canada 28.09-06.10.2014, 15-22.01.2015

University Of Leicester 30-01-09.02.2014

University of Cambridge, Department of Materials Science & Metallurgy, Phase Transformations Group" 25.09. -24.10.2015

CANMET-MATERIALS, Natural Resources Canada Ontario, Canada 28.09-06.10.2014, 15-22.01.2015

University Of Leicester 30-01-09.02.2014

Main scientific interests:

Phase transformations in steels, thixotropic casting of alloys