PhD Joanna Wachowicz, assistant professor

CONTAT

Department of Mechanical Processing of Wood
Institute of Wood Sciences and Furniture
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EDUCATION

Occupational titles and science degrees	Date (year)	Institution
Master engineer of Metallurgy	2008	Faculty of Process Engineering, Materials Science and Applied Physics Czestochowa University of Technology
Doctor of technical sciences in the field of material engineering	2016	Faculty of Materials Science and Engineering Warsaw University of Technology

PROFESIONAL COMPETENCE

Position	Date (year)	Institution
PhD student / R&D researcher	2009	Faculty of Materials Science and Engineering Warsaw University of Technology
R&D specialist	2016	GeniCore Sp. z o.o., Warsaw
Assistant professor	2017	Department of Mechanical Processing of Wood Faculty of Wood Technology Warsaw University of Life Sciences - SGGW

SELECTED CURRENT FUNCTIONS

- Mobbing Coordinator at the Institute of Wood and Furniture Sciences
- member of the Employee Evaluation Commission at the Institute of Wood Sciences and Furniture

DIDACTIC

- the lectures: Materials Science

SCIENCE

Science research:

- material engineering of tools, extra-hard tool composites designed for processing wood-based materials
- new methods (FAST-Field Assisted Sintering Technology) for obtaining tool materials

Research projects:

a) in realization

- POWR.03.05.00-00-Z033 / 17-00, "Success from nature - a comprehensive program for improving the quality of teaching process management and teaching quality at the Warsaw University of Life Sciences" (2018-2022), faculty coordinator of module 3.

b) last realized

- SGGW project for the implementation of a research task as part of an internal competition mode for young scientists: Influence of WC grain size on the properties of WCCo carbides obtained by advanced sintering technique FAST (Field Assisted Sintering Technology) (2018-2019).
- International co-financed project Influence of nitrogen ions implementation on WC-Co composites used in wood based materials machining (grant of the Polish Ministry for Science and Higher Education No W83/HZDR/2017).
- POIR.01.01.01-00-0102/15-00, Development of technological modules for the innovative method for producing SP.
- PBS1/A5/7/2012, Application of the latest generation of DDCC and BNDCC composites in the field of cutting tool, (2012-2015).
- 2011/01/D/ST8/07253, Diamond-TiB2-TiC/Ni composite produced by the pulse plasma sintering method with the participation of SHS reaction, (2011-2016).
- 0611/R/T02/2009/06: Tungsten carbide sintered composites reinforced with particles of regular boron nitride (cBN / WC-Co) for tools for machining difficult-to-cut materials.
- UDA-POIG. 01. 03. 01-14-063/08-01, New composite material - diamond in tungsten carbide matrix for cutting tools for wood-based materials.

SELECTED SCIENCE PUBLICATIONS FROM LAST 6 YEARS:

ORCID: **0000-0002-7942-3959**

2019

Wachowicz J., Wierzbicka K., Czarniak P., Wilkowski J., 2019: The influence of WC grain size on the durability of WCCo cutting edges in the machining of wood-based materials. Annals of Warsaw University of Life Sciences –SGGW, Forestry and Wood Technology No 107, 2019: 65-71.

Wachowicz J., Rosiński M., Zieliński R., Truszkowski T., 2019: Influence of compaction and degassing on the properties of submicron WCCo produced by the PPS method. Annals of Warsaw University of Life Sciences –SGGW, Forestry and Wood Technology No 108, 2019: 5-12.

Wilkowski J., Barlak M., Wachowicz J., Böttger R., Werner Z., 2019: Nano-scale hardness and elastic modulus of WC-Co composites and their relationship to the tools life during particleboard milling. Annals of Warsaw University of Life Sciences – SGGW, Forestry and Wood Technology No 106, 2019: 62-66.

Wachowicz J., Chlebiej K., Zieliński R., 2019: Influence of WC grain size on the properties of WCCo cemented carbides obtained by the method of pulse-plasma sintering SPS, Materiały Ceramiczne / Ceramic Materials, 71(3), 2019, 195-203 .

2018

Wachowicz J., Truszkowski T., Rosiński M., Ossowski M., Skrabalak G., Cyrankowski M., 2019: Tribological properties of WCCo/cBN composites produced by Pulse Plasma Sintering, Archives of Metallurgy and Materials, Arch. Metall. Mater. 63, 4: 1763-1768 DOI: 10.24425/amm.2018.125103.

Wilkowski J., Barlak M., Wachowicz J., Böttger R., Werner Z., 2018: The wear curves of nitrogen-implanted WC-Co indexable knives during particleboard milling. Annals of Warsaw University of Life Sciences – SGGW, Forestry and Wood Technology No 104, 2018: 395-399.

2016

Wachowicz, J., Rosiński M., Mątewski D., 2016: Polish company launches an innovative SPS device. Ceramic Materials 68: 284-287.

Wachowicz, J., Rosiński M., Mątewski D., 2016: Unlimited possibilities of sintering by SPS. Mechanik *89*(11), 1558-1560.

2015

Zieliński R., Wachowicz J., Michalski A., Oleszak D. 2015:, Characterization of WCCo–cBN composites produced by PPS, Inżynieria Materiałowa 5 (207): 224-228.

Wachowicz J., Zieliński R., Kozioł K., Kucharska B. 2015:, Influence of load on the properties of WCCo–cBN composites produced by the PPS method, Inżynieria Materiałowa 6 (208): 515-518.

Kotas, R., Marciniak, P., Sakowicz, B., Makowski, D., Czarnecki, M., Wachowicz, J., ... & Sobiecki, R. 2015: Control and monitoring system prototype for pulse plasma sintering process. In *2015 22nd International Conference Mixed Design of Integrated Circuits & Systems (MIXDES)* (pp. 612-617). IEEE.

2014

Rosiński M., Wachowicz J., Płociński T., Truszkowski T., Michalski A., 2014: Properties of WCCo/diamond composites produced by PPS metod intended for grill bits for machining of building Stones; Innovative Processing and Manufacturing of Advanced Ceramics and Composites II: Ceramic Transactions, vol. 243, 2014, John Wiley \& Sons.

Wachowicz, J., Michalski A. 2014: Durability of cutting blades made of WCCo/diamond composites in machining MDF. *Materiały Ceramiczne/Ceramic Materials*, *66*(1), 10-13.

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