

# Robert Grzywacz



**Academic degrees :** PhD. Eng.

**Position :** associate professor

**Engineering and technology**

**Discipline** Chemical engineering

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## **Academic qualifications:**

**Deputy Head of the Department of Chemical and Process Engineering**

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## **Membership in professional and academic boards :**

no

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## **Academic merits :**

1) The dumping of oscillatory phenomena in the process of bioethanol production by continuous fermentation, Adrian Ciesielski, Robert Grzywacz, Technical Transactions. 2019, Vol. 116, Iss. 3; 2) Nonlinear analysis of cybernetic model for aerobic growth of *Saccharomyces cerevisiae* in a continuous stirred tank bioreactor. Static bifurcations, Adrian Ciesielski, Robert Grzywacz, Biochemical Engineering Journal. 2019, Vol. 146; 3) Models of airlift bioreactors for double-substrate kinetics. The analysis of sufficient oxygenation conditions with a view of mathematical model choice, Robert Grzywacz, Chemical and Process Engineering. Vol. 40, No 1; 4) Dynamic bifurcations in continuous process of bioethanol production under aerobic conditions using *Saccharomyces cerevisiae*, Adrian Ciesielski, Robert Grzywacz, Biochemical Engineering Journal. 2020, Vol. 161; 5) Process maps with metabolic constraints for bioethanol production by continuous fermentation, Adrian Ciesielski, Robert Grzywacz, Chemical Engineering Science, 2021, Vol.229; 6) Study of a slinky-coil ground heat exchanger – Comparison of experimental and analytical solution, Barbara Larwa, Mikołaj Teper, Robert Grzywacz, Krzysztof Kupiec, International Journal of Heat and Mass Transfer. 2019, Vol. 142, 9 s;

In addition to the works mentioned above, about 40 publications from the research area described below

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## **Professional qualifications/language skills**

no

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## **Research field :**

**mathematical modeling of chemically and biochemically reacting objects, numerical simulations, nonlinear analysis, dynamics analysis, synthesis of control systems, CFD modeling**

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## **Address**

Cracow University of Technology,  
Faculty of Chemical Engineering and Technology  
Address: ul. Warszawska 24  
31-155 Krakow  
phone . 126282754  
e-mail : robert.grzywacz@pk.edu.pl

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## **Useful links :**

<http://suw.biblos.pk.edu.pl/userHomepage&uld=596&rel=BPP-author>