

**UNIVERSITY „POLITEHNICA” OF BUCHAREST
FACULTY OF CHEMICAL ENGINEERING AND BIOTECHNOLOGY
DEPARTMENT OF CHEMICAL AND BIOCHEMICAL ENGINEERING**



**Aplicarea unor tehnici de inginerie chimica la modelarea unor etape
esențiale din metabolismul central al carbonului în culturile celulare
cu aplicatie la optimizarea funcționării bioreactoarelor**

Application of chemical engineering concepts and tools to model some
essential pathways of the central carbon metabolism in living cells with
application to optimizatoin of industrial bioreactors

**Doctoral advisor
Prof. Dr. Ing. Gheorghe MARIA**

**PhD student
Ing. Marina MIHALACHI (married MUSCALU)**

PAPERS LIST

IF= the journal impact factor (UEFISCDI)

SRI= the journal relative influence factor (UEFISCDI)

No.	paper	IF	SRI
<u>1</u>	Maria, G., Gijiu, C.L., Maria, C., Tociu, C., Mihalachi, M. , Importance of considering the isotonic system hypothesis when modelling the self-control of gene expression regulatory modules in living cells, <i>Current Trends in Biomedical Engineering & Biosciences</i> , 12(2), CTBEB.MS.ID.555833 (2018), DOI : 10.19080/CTBEB.2018.12.555833. https://juniperpublishers.com/ctbeb/	0.822	0
<u>2</u>	Maria, G., Mihalachi, M. , Gijiu, C.L., Model-based identification of some conditions leading to glycolytic oscillations in <i>E. coli</i> cells, <i>Chemical and Biochemical Engineering Quarterly</i> . IF = 1.383. ISSN= 0352-9568, 32(4), 523-533, 2018, doi: 10.15255/CABEQ.2018.1300. WOS:000455636700012	1.383	0.6
<u>3</u>	Maria, G., Mihalachi, M. , Gijiu, C.L., Chemical engineering tools applied to simulate some conditions producing glycolytic oscillations in <i>e. coli</i> cells, <i>U.P.B. Sci. Bull., Series B - Chemie</i> , 80(2), 27-38, 2018, http://www.scientificbulletin.upb.ro/ . ISSN= 1454-2331	0	0
<u>4</u>	Maria, G., Mihalachi, M. , Gijiu, C.L., <i>In silico</i> optimization of a bioreactor with an <i>E. coli</i> culture for tryptophan production by using a structured model coupling the oscillating glycolysis and tryptophan synthesis, <i>Chemical Eng. Res. and Design</i> , 135, 207-221, 2018, if= 2.8,	3.08	1.615
<u>5</u>	Mihalachi, M. , Maria, G., Influence of pep glycolytic precursor on tryptophan synthesis dynamics in <i>e. coli</i> cells, <i>U.P.B. Sci. Bull., Series B - Chemie</i> , 81(2), 29-36, 2019, http://www.scientificbulletin.upb.ro/ . issn= 1454-2331. wos:000487213500003	0	0

SCIENTIFIC MEETINGS ATTENDED

1. Mihalachi, M., **Maria, G.**, Gijiu, C.L., *In-silico* modulate glycolytic oscillator in modified *E. coli* to control bioprocesses of industrial interest, 21-th Romanian International Conference on Chemistry and Chemical Engineering RICCCE-21, Constanta-Mamaia (Romania), 4-7 Sept. 2019.
<http://riccce21.chimie.upb.ro>