

Списък на научните трудове

на гл. ас. д-р Мая Христова Гунчева

за участие в конкурс за доцент по професионално направление 4.2 Химически науки: научна специалност „Биоорганична химия, химия на природните и физиологично активни вещества” за нуждите на лаборатория „Химия и биофизика на белтъци и ензими”

Публикации в списания с импакт фактор (IF, Thomson Reuters)

1. M. Guncheva, D. Zhiryakova, N. Radchenkova, M. Kambourova, Effect of nonionic detergents on the activity of a thermostable lipase from *Bacillus stearotherophilus* MC7, *J. Mol. Cat. B: Enzym.* 49, 88–91(2007).

IF₂₀₀₇ 2.102 (22 забелязани цитата)

2. M. Guncheva, D. Zhiryakova, N., Radchenkova, M. Kambourova, Acidolysis of tripalmitin with oleic acid catalyzed by a newly isolated thermostable lipase, *J. Am. Oil Chem. Soc.* 85, 129–132 (2008).

IF₂₀₀₈ 1.504 (13 забелязани цитата)

3. M. Guncheva, D. Zhiryakova, High-yield synthesis of wax esters catalysed by modified *Candida rugosa* lipase, *Biotechnol. Lett.* 30, 509–512 (2008).

IF₂₀₀₈ 1.595 (10 забелязани цитата)

4. M. Guncheva, D. Zhiryakova, N. Radchenkova, M. Kambourova, Properties of immobilized lipase from *Bacillus stearotherophilus* MC7. Acidolysis of triolein with caprylic acid, *World J. Microbiol. Biotechnol.* 25, 727–731(2009).

IF₂₀₀₉ 1.223 (6 забелязани цитата)

5. D. Zhiryakova, I. Ivanov, S. Ilieva, M. Guncheva, B. Galunsky, N. Stambolieva, Do N-terminal nucleophile hydrolases indeed have a single amino acid catalytic center?: Supporting amino acid residues at the active site of penicillin G acylase, *FEBS Journal* 276, 2589–2598 (2009).

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6. D. Zhiryakova, M. Guncheva, I. Ivanov, N. Stambolieva, Hydrolysis of phenylacetanilides catalyzed by penicillin G acylase from *Alcaligenes faecalis*: Sensitivity of the reaction to substitution in the leaving group, *Catal. Commun.* 11, 196–201 (2009).

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7. M. Guncheva, D. Zhiryakova, Catalytic properties and potential applications of *Bacillus lipases* (Review), *J. Mol. Cat. B: Enzym.* 68 (1), 1–21 (2011).

IF₂₀₁₁ 3.021 (59 забелязани цитата)

8. M. Guncheva, E. Tashev, D. Zhiryakova, T. Tosheva, N. Tzokova Immobilization of lipase from *Candida rugosa* on novel phosphorous-containing polyurethanes: application in wax ester synthesis, *Process Biochem.* 46, 923 – 930 (2011).

IF₂₀₁₁ 3.032 (11 забелязани цитата)

9. Z. Bobcheva, D. Zhiryakova, M. Guncheva, Evaluation of the inhibitory potential of five squaric acid derivatives against pancreatic lipase, *J. Enzym. Inhib. Med. Chem.* 26(4), 587-591 (2011).

IF₂₀₁₁ 1.614 (без забелзани цитати)

10. M. Guncheva, M. Dimitrov, D. Zhiryakova, Novel nanostructured tin dioxide as promising carrier for *Candida rugosa* lipase, *Process Biochem.* 46, 2170 – 2177 (2011).

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11. M. Guncheva, M. Dimitrov, D. Zhiryakova, Nanosized tin dioxide — Unexplored carrier for lipase immobilization, *Catal. Commun.* 16, 205 – 209 (2011).

IF₂₀₁₁ 3.307 (1 забелязан цитат)

12. M. Guncheva, M. Dimitrov, M. Kambourova, Excellent stability and synthetic activity of immobilized on tin dioxide lipase from *B. Stearothermophilus* MC7 in environmentally friendly medium, *Biotechnol. Biotechnol. Eq.* 27 (6), 4317–4322 (2013).

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13. M. Guncheva, M. Dimitrov, F. Napoly, M. Draye, B. Andrioletti, Novel hybrid materials on the basis of nanostructured tin dioxide and a lipase from *Rhizopus delemar* with improved enantioselectivity, *J. Mol. Cat. B: Enzym.* 102, 72 – 80 (2014).

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14. M. Dimitrov, M. Guncheva, D. Zhiryakova, Tz. Lazarova, G. Lalev, T. Tsoncheva, Nanostructured tin dioxide – a promising multipurpose support material for catalytic and biocatalytic applications, *Chem. Eng. J.* 252, 55–63 (2014).

IF₂₀₁₄ 4.577 (2 забелязани цитата)

15. M. Guncheva, K. Paunova, M. Dimitrov, D. Yancheva, Stabilization of *Candida rugosa* lipase on nanosized zirconia-based materials, *J. Mol. Cat. B:Enzym.* 108 43–50 (2014).

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16. M. Guncheva, K. Paunova, D. Yancheva, I. Svinyarov, M. Bogdanov, Effect of two series ionic liquids based on non-nutritive sweeteners on catalytic activity and stability of the industrially important lipases from *Candida rugosa* and *Rhizopus delemar*, *J. Mol. Cat. B: Enzym.* 117, 62–68 (2015).

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17. M. Guncheva, K. Paunova, P. Ossowicz, Z. Rozwadowski, E. Janus, K. Idakieva, S. Todinova, Y. Raynova, V. Uzunova, S. Apostolova, R. Tzoneva, D. Yancheva Modification of *Rapana thomasiana* hemocyanin with choline amino acid salts significantly enhances its antiproliferative activity against MCF-7 human breast cancer cells, *RSC Adv.* 5, 63345–63354 (2015).

IF₂₀₁₄ 3.84 (без забелязани цитата)

18. Ts. Todorova, M. Guncheva, R. Dimitrova, Sv. Momchilova, Walnut oil - unexplored raw material for lipase-catalyzed synthesis of low-calorie structured lipids for clinical nutrition, *J. Food Biochem.* 39, 603–611 (2015).

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19. M. Guncheva, K. Paunova, P. Ossowicz, Z. Rozwadowski, E. Janus, K. Idakieva, S. Todinova, Y. Raynova, V. Uzunova, S. Apostolova, R. Tzoneva, D. Yancheva, *Rapana thomasiana* hemocyanin modified with ionic liquids with enhanced anti breast cancer activity, *Int. J. Biol. Macromol.* 82, 798–805 (2016).

IF₂₀₁₄ 2.858 (без забелязани цитата)

В материали от симпозиуми:

20. K. Paunova, M. Guncheva, D. Yancheva, Environmentally friendly approach for synthesis of β -amino esters in Peptides 2014 *Proceedings of the 33rd European Peptide Symposium* E. Naydenova, T. Pajpanova, D. Danalev (Eds) pp. 96–97. ISBN 978-619-90427-2-4 (2014).

(без забелязани цитати)

21. M. Guncheva, K. Paunova, D. Yancheva, S. Todinova, I. Svinyarov, M. Bogdanov, Conformational stability of insulin in imidazolium-based ionic liquids in Peptides 2014 *Proceedings of the 33rd European Peptide Symposium* E. Naydenova, T. Pajpanova, D. Danalev (Eds) pp. 182–183. ISBN 978-619-90427-2-4 (2014).

(без забелязани цитати)

В дисертационния труд за ОНС „Доктор“:

22. M. Guncheva, P. Dolashka-Angelova, N. Stambolieva, Arylamidase activity of neutral proteinase from *Saccharomonospora canescens*. Comparison with other Zn-proteinases that exhibit the same activity, *Biochim. Biophys. Acta: Prot. Str.Mol. Enzym.* 1597335 – 338 (2002).

IF₂₀₀₂ 2.798 (5 забелязани цитата)

23. M. Guncheva, I. Ivanov, N. Stambolieva, Kinetic studies on the arylamidase activity exhibited by proteinases belonging to different mechanistic classes, *Compt. Rend. Acad. Bulg. Sci.* 55, 41 – 44 (2002).

(без забелязани цитати)

24. M. Guncheva, I. Ivanov, B. Galunsky, N. Stambolieva, J. Kaneti, Kinetic studies and molecular modeling attribute a crucial role in the specificity and stereoselectivity of penicillin acylase to the pair ArgA145-ArgB263, *Eur. J. Biochem.* 271, 2272 - 2279 (2004).

IF₂₀₀₄ 3.260 (18 забелязани цитата)

Общо научните трудове са публикувани в:

1. Списания с импакт фактор - **21**;
2. Списания без индексация - **1**;
3. В материали от симпозиуми - **2**.

Цитати (общо/без публикациите за ОНС „Доктор“): 161/138.

Подпис:

/д-р Мая Гунчева/

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