Справка за изпълнение на минималните национални и допълнителни изисквания на ас. д-р Петър Цветков

Група от показатели	Съдържание	Доктор	Доктор на науките	Главен асистент	Доцент	ас. д-р Петър Цветков
А	Показател 1	50	-	-	50	**50**
Б	Показател 2	-	-	-	-	-
В	Показатели 3 или 4	-	-	-	100	**107**
Г	Сума от показателите от 5 до 10	30	-	-	220	**237**
Д	Показател 11	-	-	-	60	**90**
Е	Сума от показателите от 12 до 20	-	-	-	-	-
Ж*	Сума от показателите от 21 до 29	-	-	-	70	**80**

Общ брой точки: 564

Таблица: Брой точки по отделните показатели за заемане на академична длъжност „Доцент”.

Група от показатели	Показател	Брой точки
А	1. Дисертационен труд за присъждане на образователна и научна степен "доктор" **„Синтез и изследване на оксиди с перовскитов тип структура и кристалографски равнини на сразване”** (№ 000604, издадена на 30.09.2015 г.)	**50**
Б	2. Дисертационен труд за присъждане на научна степен "доктор на науките"	-
В	3. Хабилитационен труд - монография, или **4.4. Хабилитационен труд - научни публикации виздания, които са реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и/или Scopus)**	- **25 х 3 публ. в Q1** **20 х 1 публ. в Q2** **12 х 1 публ. в Q4** Общо: **107** точки
Г	5. Публикувана монография, която не е представена като основен хабилитационен труд	-
	6. Публикувана книга на базата на защитен дисертационен труд за присъждане на образователна и научна степен "доктор" или за присъждане на научна степен "доктор на науките"	-
	7. Научна публикация в издания, които са реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и/или Scopus), извън хабилитационния труд	**25 х 3 публ. в Q1** **20 х 3 публ. в Q2** **15 х 2 публ. в Q3** **12 х 6 публ. в Q4** Общо: **237** точки
	8. Публикувана глава от книга или колективна монография	-
	9. Изобретение, патент или полезен модел, за което е издаден защитен документ по надлежния ред	-
	10. Публикувана заявка за патент или полезен модел	-

Д	**11. Цитирания в научни издания, монографии, колективни томове и патенти, реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и Scopus)** <u>Забелязани в Scopus цитати за публикация:</u> Nikolova D., Edreva-Kardjieva R., Gouliev G., Grozeva T., Tzvetkov P. The state of (K)(Ni)Mo/γ-Al2O3 catalysts after water-gas shift reaction in the presence of sulfur in the feed: XPS and EPR study (2006) Applied Catalysis A: General, (2) 135-144	**45 x 2 = 90 точки**

Е	12. Придобита научна степен "доктор на науките"	-
	13. Ръководство на успешно защитил докторант (n е броят съръководители на съответния докторант)	-
	14. Участие в национален научен или образователен проект	-
	15. Участие в международен научен или образователен проект	-
	16. Ръководство на национален научен или образователен проект	-
	17. Ръководство на българския екип в международен научен или образователен проект	-
	18. Привлечени средства по проекти, ръководени от кандидата	-
	19. Публикуван университетски учебник или учебник, който се използва в училищната мрежа	-
	20. Публикувано университетско учебно пособие или учебно пособие, което се използва в училищната мрежа	-
Ж*	**21. Индекс по Хирш (H) (Scopus)** H = 5 (минимум) за доцент H = 10 (минимум) за професор	**8 x10 = 80**
	22. Ръководство на успешно защитил докторант (n е броят съръководители на съответния докторант)	-

	23. Участие в национален научен или образователен проект	-
	24. Участие в международен научен или образователен проект	-
	25. Ръководство на национален научен или образователен проект	-
	26. Ръководство на българския екип в международен научен или образователен проект	-
	27. Привлечени средства по проекти, ръководени от кандидата	-
	28. Публикуван университетски учебник или учебник, който се използва в училищната мрежа	-
	29. Публикувано университетско учебно пособие или учебно пособие, което се използва в училищната мрежа	-

Общо брой точки: 564

Група показатели А

Диплома за образователна и научна степен доктор № 000604, издадена на 30.09.2015 г.

Група показатели В

Показател 4:

01. Tzvetkov, P., Ivanova, D., Kovacheva, D., Nikolov, V.
Synthesis and powder XRD characterization of $Al_{2-x}In_x(WO_4)_3$ solid solutions
(2009) Journal of Alloys and Compounds, 470 (1-2), pp. 492-496.
Q1 – 25 т.
02. Ivanov, V.A., Marychev, M.O., Andreev, P.V., Koseva, I., Tzvetkov, P., Nikolov, V.
Novel solvents for the single crystal growth of germanate phases by the flux method
(2015) Journal of Crystal Growth, 426, pp. 25-32.
Q1 – 25 т.
03. Koseva, I., Nikolov, V., Petrova, N., Tzvetkov, P., Marychev, M.
Thermal behavior of germanates with olivine structure
(2016) Thermochimica Acta, 646, pp. 1-7.
Q2 – 20 т.
04. Ivanov, V.A., Simanovskiy, D.V., Marychev, M.O., Andreev, P.V., Koseva, I., Tzvetkov, P., Nikolov, V.

$Ca_2GeO_4:Cr^{4+}$ transparent nano-glass ceramics
(2017) Journal of Non-Crystalline Solids, 456, pp. 76-82.
Q1 – 25 т.

05. Koseva, I., Nikolov, V., Yordanova, A., Tzvetkov, P., Petrova, N.
Thermal behavior of some germanates with non-olivine structure
(2017) Bulgarian Chemical Communications, 49 (Special edition B). pp. 188-192
Q4 – 12 т.

Група показатели Г

Публикувани статии за придобиване на образователна и научна степен „Доктор”

(общо **49** точки):

1. Tzvetkov, P., Petrova, N., Kovacheva, D.
Combustion assisted synthesis and characterization of $Pb_{1.33}Sr_{0.67-x}Ba_xFe_2O_5$ ($0 \leq x \leq 0.67$) perovskite-type materials.
(2009) Journal of Alloys and Compounds, 485 (1-2), pp. 862-866.
Q1 – 25 т.
2. Tzvetkov, P., Kovacheva, D., Nihtianova, D., Ruskov, T.
Structure stability towards cation substitutions in $A_2B_2O_5$ perovskites with crystallographic shear planes
(2011) Bulgarian Chemical Communications, 43 (2), pp. 339-345.
Q4 – 12 т.
3. Tzvetkov, P., Kovacheva, D., Nihtianova, D., Velichkova, N., Ruskov, T.
Synthesis and crystal structure of new $PbBaFe_{2-x}Mn_xO_5$ perovskite-type compounds
(2012) Bulgarian Chemical Communications, 44 (SPECIAL ISSUE), pp. 137-145.
Q4 – 12 т.

Показател 7:

01. S. Zaneva, P. Tzvetkov, Ts. Stanimirova, G. Kirov
Comparative study of the layered double hydroxide minerals stability
(2006) Comptes rendus de l'Acad´emie bulgare des Sciences, 59 (4), 393-398.
Q2 – 20 т.
02. Nikolova, D., Edreva-Kardjieva, R., Gouliev, G., Grozeva, T., Tzvetkov, P.
The state of (K)(Ni)Mo/γ-Al_2O_3 catalysts after water-gas shift reaction in the presence of sulfur in the feed: XPS and EPR study
(2006) Applied Catalysis A: General, 297 (2), pp. 135-144.
Q2 – 20 т.
03. Gabrovska, M., Edreva-Kardjieva, R., Tenchev, K., Tzvetkov, P., Spojakina, A., Petrov, L.
Effect of Co-content on the structure and activity of Co-Al hydrotalcite-like materials as catalyst precursors for CO oxidation
(2011) Applied Catalysis A: General, 399 (1-2), pp. 242-251.
Q2 – 20 т.
04. Gabrovska, M., Krstić, J., Tzvetkov, P., Tenchev, K., Shopska, M., Vukelić, N., Jovanović, D.
Effect of the support and the reduction temperature on the formation of metallic nickel phase in Ni/Silica gel precursors of vegetable oil hydrogenation catalysts

(2011) Russian Journal of Physical Chemistry A, 85 (13), pp. 2392-2398.
Q4 – 12 т.

05. Gabrovska, M., Edreva-Kardjieva, R., Crişan, D., Tzvetkov, P., Shopska, M., Shtereva, I.
Ni-Al layered double hydroxides as catalyst precursors for CO_2 removal by methanation
(2012) Reaction Kinetics, Mechanisms and Catalysis, 105 (1), pp. 79-99.
Q3 – 15 т.
06. Gabrovska, M.V., Nikolova, D.A., Krstić, J.B., Loncarević, D.R., Tzvetkov, P.T., Shopska, M.G., Radonjić, V.D., Stanković, M.V., Jovanović, D.M., Spasov, L.T., Simeonov, D.B.
Improved catalyst performance of Ni/SiO2 in vegetable oil hydrogenation: Impact of Mg dopant
(2018) Bulgarian Chemical Communications, 50, pp. 161-168.
Q4 – 12 т.
07. Ruskov, T., Spirov, I., Green II, H.W., Kovacheva, D., Tzvetkov, P., Georgieva, M., Dobrzhinetskaya, L.
MÖssbauer milliprobe studies of small mineral samples with a silicon drift detector
(2008) Physics and Chemistry of Minerals, 35 (9), pp. 485-491.
Q1 – 25 т.
08. Dimitrovska-Lazova, S., Kovacheva, D., Tzvetkov, P.
Structural characteristics of $GdCo_{1-x}Cr_xO_3$ (x = 0, 0.33, 0.5, 0.67, 1) perovskites
(2012) Bulgarian Chemical Communications, 44 (SPECIAL ISSUE), pp. 47-54.
Q4 – 12 т.
09. Dimitrovska-Lazova, S., Kovacheva, D., Aleksovska, S., Marinšek, M., Tzvetkov, P.
Synthesis and structural details of perovskites within the series $PrCo_{1-x}Cr_xO_3$ (x = 0, 0.33, 0.5, 0.67 and 1)
(2012) Bulgarian Chemical Communications, 44 (SPECIAL ISSUE), pp. 37-46.
Q4 – 12 т.
10. Lazarova, Ts., Tzvetkov, P., Tumbalev, V., Atanassova-Vladimirova, S., Ivanov, G., Naydenov, A., Kovacheva, D.
Complete oxidation of methane on Pd-substituted perovskite $LaCu_{0.5}Mn_{0.5}O_3$
(2015) Bulgarian Chemical Communications, 47 (SPECIAL ISSUE C), pp. 54-58.
Q4 – 12 т.
11. Dimitrovska-Lazova, S., Aleksovska, S., Tzvetkov, P., Mirčeski, V., Kovacheva, D.
Influence of Y-ion substitution on structural and electrochemical characteristics of $YCo_{0.5}Fe_{0.5}O_3$
(2015) Bulgarian Chemical Communications, 47 (1), pp. 245-252
Q4 – 12 т.
12. Dimitrovska-Lazova, S., Aleksovska, S., Tzvetkov, P.
Synthesis and crystal structure determination of $YCo_{1-x}Fe_xO_3$ (x = 0, 0.33, 0.5, 0.67 and 1) perovskites
(2015) Journal of Chemical Sciences, 127 (7), pp. 1173-1181.
Q3 – 15 т.
13. Petrova, B., Tsyntsarski, B., Budinova, T., Petrov, N., Ania, C.O., Parra, J.B., Mladenov, M., Tzvetkov, P.
Synthesis of nanoporous carbons from mixtures of coal tar pitch and furfural and their application as electrode materials
(2010) Fuel Processing Technology, 91 (11), pp. 1710-1716.
Q1 – 25 т.

14. Tsyntsarski, B., Petrova, B., Budinova, T., Petrov, N., Krzesinska, M., Pusz, S., Majewska, J., Tzvetkov, P.
Carbon foam derived from pitches modified with mineral acids by a low pressure foaming process
(2010) Carbon, 48 (12), pp. 3523-3530.
Q1 – 25 т.

Група показатели Д

Показател 11:

Забелязани цитати в SCOPUS за публикация:
Nikolova D., Edreva-Kardjieva R., Gouliev G., Grozeva T., Tzvetkov P.
The state of (K)(Ni)Mo/γ-Al2O3 catalysts after water-gas shift reaction in the presence of sulfur in the feed: XPS and EPR study
(2006) Applied Catalysis A: General, (2) 135-144

01. Wang, W., Zhang, L., Han, Y., Zhang, Y., Liu, X., Xu, S.
Cleaner recycling of spent Ni–Mo/γ-Al2O3 catalyst based on mineral phase reconstruction
(2019) Journal of Cleaner Production, 232, pp. 266-273.

02. Wang, S.-Y., Zhou, Z.-H.
Molybdenum imidazole citrate and bipyridine homocitrate in different oxidation states-balance between coordinated α-hydroxy and α-alkoxy groups
(2019) RSC Advances, 9 (1), pp. 519-528.

03. Badoga, S., Misra, P., Kamath, G., Zheng, Y., Dalai, A.K.
Hydrotreatment followed by oxidative desulfurization and denitrogenation to attain low sulphur and nitrogen bitumen derived gas oils
(2018) Catalysts, 8 (12), art. no. 645, .

04. Zou, X., Zou, X., Sun, Q., Zhang, Y., Li, G.-D., Liu, Y., Wu, Y., Yang, L.
Ultrafast surface modification of Ni 3 S 2 nanosheet arrays with Ni-Mn bimetallic hydroxides for high-performance supercapacitors
(2018) Scientific Reports, 8 (1), art. no. 4478, .

05. Krobkrong, N., Itthibenchapong, V., Khongpracha, P., Faungnawakij, K.
Deoxygenation of oleic acid under an inert atmosphere using molybdenum oxide-based catalysts
(2018) Energy Conversion and Management, 167, pp. 1-8.

06. Sasaki, T., Suzuki, T., Takaoka, M., Akasaka, Y.
Performance of a low temperature reactive sulfur-tolerant WGS catalyst using industrial coal gasification gas feed
(2017) International Journal of Hydrogen Energy, 42 (4), pp. 2008-2017.

07. Wang, N., Hu, R., Li, J., Bai, F., Zhang, Y., Su, H., Gu, X.
Insight into the promotion mechanism of K and Ni in sulfide molybdenum-based catalysts for higher alcohols synthesis from syngas
(2017) Catalysis Communications, 91, pp. 57-61.

08. Sasaki, T., Suzuki, T., Iizuka, H., Takaoka, M.
Reaction mechanism analysis for molybdenum-based water-gas shift catalysts
(2017) Applied Catalysis A: General, 532, pp. 105-110.

09. Sasaki, T., Suzuki, T., Akasaka, Y., Takaoka, M.
Generation efficiency improvement of IGCC with CO 2 capture by the application of the low temperature reactive shift catalyst
(2017) Energy, 118, pp. 60-67.

10. Chianese, S., Fail, S., Binder, M., Rauch, R., Hofbauer, H., Molino, A., Blasi, A., Musmarra, D.
Experimental investigations of hydrogen production from CO catalytic conversion of tar rich syngas by biomass gasification
(2016) Catalysis Today, pp. 182-191.

11. Yu, M.-F., Li, W.-W., Li, X.-D., Lin, X.-Q., Chen, T., Yan, J.-H.
Development of new transition metal oxide catalysts for the destruction of PCDD/Fs
(2016) Chemosphere, 156, pp. 383-391.

12. Pinaeva, L.G., Prosvirin, I.P., Dovlitova, L.S., Danilova, I.G., Sadovskaya, E.M., Isupova, L.A.
MeOx/Al2O3 and MeOx/CeO2 (Me = Fe, Co, Ni) catalysts for high temperature N2O decomposition and NH3 oxidation
(2016) Catalysis Science and Technology, 6 (7), pp. 2150-2161.

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Reaction selectivity to hydrocarbons and solid-state carbon over molybdenum sulfide-based shift catalyst
(2016) Applied Catalysis A: General, 514, pp. 83-90.

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Sour gas shift process over sulfided Co-Mo-K catalysts supported on carbon material - Support characterization and catalytic activity of catalysts
(2015) Fuel Processing Technology, 138, art. no. 4566, pp. 305-313.

15. Reddy, G.K., Smirniotis, P.G.
Water Gas Shift Reaction: Research Developments and Applications
(2015) Water Gas Shift Reaction: Research Developments and Applications, pp. 1-261.

16. Liu, B., Zong, Q., Du, X., Zhang, Z., Xiao, T., Almegren, H.
Novel sour water gas shift catalyst (SWGS) for lean steam to gas ratio applications
(2015) Fuel Processing Technology, 134, art. no. 4411, pp. 65-72.

17. Sasaki, T., Suzuki, T.
Sulfide molybdenum catalysts for water-gas shift reaction: Influence of the kind of promoters and supports to generate MoS 2
(2014) Applied Catalysis A: General, 484, pp. 79-83.

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Preparation of WO3/Ni-Bi oxygen-evolution catalyst by situ electrolysis
(2014) Taiyangneng Xuebao/Acta Energiae Solaris Sinica, 35 (10), pp. 1883-1888.

19. Gonchar, A., Risse, T.
Characterisation of paramagnetic Mo impurities on MgO(100) single-crystalline films grown on Mo(100)
(2013) Molecular Physics, 111 (18-19), pp. 2708-2716.

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Metal-Ci oxygen-evolving catalysts generated in situ in a mild H2O/CO2 environment

(2013) International Journal of Hydrogen Energy, 38 (13), pp. 5251-5258.

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The main factors controlling generation of synthetic natural gas by methanation of synthesis gas in the presence of sulfur-resistant Mo-based catalysts
(2013) Kinetics and Catalysis, 54 (3), pp. 338-343.

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Hydrogen production by water gas shift reaction over Pd-K impregnated Co oxide catalyst
(2013) Catalysis Letters, 143 (4), pp. 339-344.

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Mechanisms and energies of water gas shift reaction on Fe-, Co-, and ni-promoted MoS2 catalysts
(2012) Journal of Physical Chemistry C, 116 (48), pp. 25368-25375.

24. Polychronopoulou, K., Malliakas, C.D., He, J., Kanatzidis, M.G.
Selective surfaces: Quaternary Co(Ni)MoS-based chalcogels with divalent (Pb 2+, Cd 2+, Pd 2+) and trivalent (Cr 3+, Bi 3+) metals for gas separation
(2012) Chemistry of Materials, 24 (17), pp. 3380-3392.

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Effect of flash calcined alumina support and potassium doping on the activity of Co-Mo catalysts in sour gas shift process
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Ce-K-promoted Co-Mo/Al2O3 catalysts for the water gas shift reaction
(2012) International Journal of Hydrogen Energy, 37 (8), pp. 6363-6371.

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Sulphur-tolerant catalysts in small-scale hydrogen production, a review
(2012) International Journal of Hydrogen Energy, 37 (5), pp. 3978-3992.

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Correlation of surface characteristics with catalytic performance of potassium promoted Pd/Al2O3 catalysts: The case of N 2O reduction by alkanes or alkenes
(2011) Topics in Catalysis, 54 (16-18), pp. 1135-1142.

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Co-Mo-based catalyst and catalytic reaction process for water-gas shift
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Potassium-decorated active carbon supported Co-Mo-based catalyst for water-gas shift reaction
(2011) Journal of Natural Gas Chemistry, 20 (1), pp. 77-83.

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W-promoted Co-Mo-K/γ-Al2O3 catalysts for water-gas shift reaction
(2010) Catalysis Communications, 10 (14), pp. 1864-1867.

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CoMo/Al2O3-SiO2 catalysts prepared by co-equilibrium deposition filtration: Characterization and catalytic behavior for the hydrodesulphurization of thiophene
(2010) Applied Catalysis B: Environmental, 96 (3-4), pp. 496-507.

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Peak overlaps and corresponding solutions in the X-ray photoelectron spectroscopic study of hydrodesulfurization catalysts
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Effect of Mg/Al atom ratio of support on catalytic performance of Co-Mo/MgO-Al2O3 catalyst for water gas shift reaction
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MgO-Al2O3 mixed oxides-supported co-mo-based catalysts for high-temperature water-gas shift reaction
(2008) Catalysis Letters, 126 (1-2), pp. 100-105.

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Direct synthesis of methanethiol from H 2 S-rich syngas over sulfided Mo-based catalysts
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Nano-structured nickel-molybdenum carbide catalyst for low-temperature water-gas shift reaction
(2006) Applied Catalysis A: General, 313 (2), pp. 137-145.

Група показатели Ж

Показател 21:

Индекс по Хирш в Scopus H = 8 (x10)