

Справка за минимални изисквания на БАН (А-Е) и ИОНХ (Ж) към научната дейност на кандидатите за заемане на академична длъжност "професор"

на доц. Михаил Михайлов

Таблица 1. Минимални изисквани точки по групи показатели

Група от показатели	Съдържание	Минимални точки	Точки на доц. М. Михайлов
А	Показател 1	50	50
Б	Показател 2	-	-
В	Показатели 3 или 4	100	125
Г	Сума от показателите от 5 до 10	220	450
Д	Показател 11	120	774
Е	Сума от показателите от 12 до 20	150	237
Ж*	Сума от показателите от 21 до 29	120	180

Таблица 2. Брой точки по показатели:

Група	Показател	Брой точки (мин. изисквани)	Точки по показатели
А	1. Дисертационен труд за присъждане на образователна и научна степен "доктор"	50	50
Б	2. Дисертационен труд за присъждане на научна степен „доктор на науките“	-	-
В	3. Хабилизационен труд – монография, или 4. Хабилизационен труд - научни публикации в издания, които са реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и/или Scopus)	100 за монография 25 за публ. в Q1 20 за публ. в Q2 15 за публ. в Q3 12 за публ. в Q4 10 за публ. в издание със SJR	- 5бр. x 25 = 125
	5. Публикувана монография, която не е представена като основен хабил. труд	30	-

* Допълнителни изисквания на ИОНХ към научната дейност на кандидатите за заемане на академичните длъжности "доцент" и "професор".

Г	6. Публикувана книга на базата на защитен дисертационен труд	20	-
	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 за публ. в Q1 20 за публ. в Q2 15 за публ. в Q3 12 за публ. в Q4 10 за публ. в издание със SJR	18бр. x 25 = 450
	8. Публикувана глава от книга	15	-
	9. Изобретение, патент или полезен модел	25	-
	10. Публикувана заявка за патент	15	-
Д	11. Цитирания в научни издания реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и Scopus)	2	387 бр. x 2 =774
Е	12. Придобита научна степен „доктор на науките“	75	-
	13. Ръководство на успешно защитил докторант	50/n	
	14. Участие в национален научен или образователен проект	10	9 бр. x 10 =90
	15. Участие в международен научен проект	20	1 бр. x 20 = 20
	16. Ръководство на национален научен или образователен проект	20	2 бр. x 20 = 40
	17. Ръководство на българския екип в международен научен проект	50	-
	18. Привлечени средства по проекти, ръководени от кандидата	1 точка за всеки 5000 лв.	436448 лв./ 87
	19. Публикуван университетски учебник	40/n	-
	20. Публикувано университетско пособие	20/n	-
Ж*	21. Индекс по Хирш (H) (Scopus) H = 10 (минимум) за професор	Hx10	18 x 10 = 180 т.
	22. Ръководство на успешно защитил докторант	50/n**	
	23. Участие в национален научен проект	10	-
	24. Участие в международен проект	20	-
	25. Ръководство на национален научен проект	20	-
	26. Ръководство на българския екип в международен научен проект	50	-
	27. Привлечени средства по проекти, ръководени от кандидата	1 точка за всеки 5000 лв	-
	28. Публикуван университетски учебник	40/n	-
	29. Публикувано университетско пособие	20/n	-

Приложение към група от показатели В

4. Хабилитационен труд - научни публикации в издания, които са реферирани и индексирани в световноизвестни бази данни с научна информация (Web of Science и/или Scopus)

No	Научна публикация (номерация от общия списък с публикации)	Q	ISI IF
4.1	46. G.N. Vayssilov, M. Mihaylov , P.St. Petkov, K.I. Hadjiivanov and K. Neyman, "Reassignment of the Vibrational Spectra of Carbonates, Formates and Related Surface Species on Ceria: A Combined Density Functional and Infrared Spectroscopy Investigation" <u>J. Phys. Chem.</u> , C115 (2011) 23435-23454.	Q1	4,805
4.2	56. M.Y. Mihaylov , E.Z. Ivanova, H.A. Aleksandrov, P.St. Petkov, G.N. Vayssilov and K.I. Hadjiivanov "FTIR and Density Functional Study of NO Interaction with Reduced Ceria: Identification of N ₃ and NO ₂ as New Intermediates in NO Conversion" <u>Appl. Catal.</u> , B 176-177 (2015) 107-119.	Q1	8,328
4.3	57. M.Y. Mihaylov , E.Z. Ivanova, H.A. Aleksandrov, P.St. Petkov, G.N. Vayssilov and K.I. Hadjiivanov "Formation of N ³⁻ During Interaction of NO with Reduced Ceria" <u>Chem. Commun.</u> , 51 (2015) 5668-5671.	Q1	6,567
4.4	67. M.Y. Mihaylov , E.Z. Ivanova, H.A. Aleksandrov, P.S. Petkov, G.N. Vayssilov, K.I. Hadjiivanov Species formed during NO adsorption and NO + O ₂ co-adsorption on ceria: A combined FTIR and DFT study. <u>Mol. Catal.</u> , 451 (2018) 114-124	Q1	0,999
4.5	71. M. Y. Mihaylov , E. Z. Ivanova, G. N. Vayssilov, K. I. Hadjiivanov "Revisiting ceria-NO _x interaction: FTIR studies" <u>Catal. Today.</u> , https://doi.org/10.1016/j.cattod.2019.05.014	Q1	4,667

Приложение към група от показатели Г

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

No	Научна публикация (номерация от общия списък с публикации)	Q	ISI IF
7.1	27. M. Mihaylov , E. Ivanova, Y. Hao, K. Hadjiivanov, H. Knözinger and B. Gates "Gold Supported on La ₂ O ₃ : Structure and Reactivity with CO ₂ and Implications for CO Oxidation Catalysis" <u>J. Phys. Chem.</u> , C112 (2008) 18973-18983.	Q1	3,47
7.2	30. M. Mihaylov , E. Ivanova, Y. Hao, K. Hadjiivanov, B.C. Gates and H. Knözinger "Oxidation by CO ₂ of Au ⁰ Species on La ₂ O ₃ -Supported Gold Clusters" <u>Chem. Commun.</u> (2008) 175-177.	Q1	5,34
7.3	31. V. Blasin-Aubé, O. Marie, J. Saussey, M. Daturi, C. Hamon, M. Mihaylov , E. Ivanova and K. Hadjiivanov "Iron Nitrosyl Species in Fe-FER: A Complementary Mössbauer and FTIR Spectroscopy Study" <u>J. Phys. Chem.</u> , C113 (2009) 8387-8393.	Q1	4,224
7.4	32. Y. Hao, M. Mihaylov , E. Ivanova, K. Hadjiivanov, H. Knözinger and B.C. Gates "CO Oxidation Catalyzed by Gold Supported on MgO: Spectroscopic Identification of Carbonate-like Species Bonded to Gold during Catalyst Deactivation" <u>J. Catal.</u> , 261 (2009) 137–149.	Q1	5,288
7.5	33. I. Malpartida, E. Ivanova, M. Mihaylov , K. Hadjiivanov, V. Blasin-Aube, O. Marie and M. Daturi "CO and NO Adsorption for the IR Characterization of Fe ²⁺ Cations in Ferrierite: An Efficient Catalyst for NOx SCR with NH ₃ as Studied by Operando IR Spectroscopy" <u>Catal. Today.</u> , 149 (2010) 295-303.	Q1	2,993
7.6	34. M. Mihaylov , E. Ivanova, N. Drenchev and K. Hadjiivanov "Coordination Chemistry of Fe ²⁺ Ions in Fe,H-ZSM-5 Zeolite as Revealed by the IR Spectra of Adsorbed CO and NO" <u>J. Phys. Chem.</u> , C114 (2010) 1004-1014.	Q1	4,524

7.7	36. N. Drenchev, E. Ivanova, M. Mihaylov and K. Hadjiivanov "CO as an IR Probe Molecule for Characterization of Copper Ions in a Basolite C300 MOF sample" <u>Phys. Chem. Chem. Phys.</u> , 12 (2010) 6423-6427.	Q1	3,454
7.8	38. E. Ivanova, M. Mihaylov , K. Hadjiivanov, V. Blasin-Aube, O. Marie, A. Plesniar and M. Daturi "Evidencing Three Distinct Fe ^{II} Sites in Fe-FER Zeolites by Using CO and NO as Complementary IR Probes" <u>Appl. Catal.</u> , B93 (2010) 325-338.	Q1	4,749
7.9	41. M. Mihaylov , E. Ivanova, K. Chakarova, P. Novachka and K. Hadjiivanov "Reduced Iron Sites in Fe-BEA and Fe-ZSM-5 Zeolites: FTIR study of CO Adsorption and ¹² C ¹⁶ O- ¹³ C ¹⁸ O Co-adsorption" <u>Appl. Catal.</u> , A391 (2011) 3-10.	Q1	3,903
7.10	43. K. Chakarova, M. Mihaylov , S. Ivanova, M.A. Centeno and K. Hadjiivanov "Well Defined Negatively Charged Gold Carbonyls on Au/SiO ₂ " <u>J. Phys. Chem.</u> , C115 (2011) 21273-21282.	Q1	4,805
7.11	61. M. Mihaylov , S. Andonova, K. Chakarova, A. Vimont, E. Ivanova, N. Drenchev and K. Hadjiivanov "An Advanced Approach for Measuring Acidity of Hydroxyls in Confined Space: FTIR Study of Low-temperature CO and ¹⁵ N ₂ Adsorption on MOF Samples from the MIL-53(Al) Series" <u>Phys. Chem. Chem. Phys.</u> , 17 (2015) 24304-24314.	Q1	4,449
7.12	62. M. Mihaylov , K. Chakarova, S. Andonova, N. Drenchev, E. Ivanova, E.A. Pidko, A.Sabetghadam, B. Seoane, J. Gascon, F. Kapteijn, K. Hadjiivanov "Adsorption of CO ₂ on MIL-53(Al): FTIR evidence of the formation of dimeric CO ₂ species" <u>Chem. Commun.</u> 52 (2016) 1494-1497.	Q1	6,319
7.13	64. N. Drenchev, M. Mihaylov , P. Dietzel, A. Albinati, P. Georgiev and K. Hadjiivanov "Low-Temperature Adsorption of H ₂ and D ₂ on Dehydrated and Water Precovered CPO-27-Ni" <u>J. Phys. Chem.</u> , C120 (2016) 23083-23092.	Q1	4,536

7.14	65. M. Mihaylov , K. Chakarova, S. Andonova, N. Drenchev, E. Ivanova, A. Sabetghadam, B. Seoane, J. Gascon, F. Kapteijn and K. Hadjiivanov "Adsorption Forms of CO ₂ on MIL-53(Al) and NH ₂ -MIL-53(Al) as Revealed by FTIR Spectroscopy" <u>J. Phys. Chem.</u> , C120 (2016) 23584-23595.	Q1	4,536
7.15	66. M. Benzaqui, R.S Pillai, A. Sabetghadam, V. Benoit, P. Normand, J. Marrot, N. Menguy, D. Montero, W. Shepard, A. Tissot, Ch. Martineau-Corcus, C. Sicard, M. Mihaylov , F. Carn, I. Beurroies, A. Ph.L. Llewellyn, G. De Weireld, K. Hadjiivanov , J. Gascon, F. Kapteijn, G. Maurin, N. Steunou, Ch. Serre, "Revisiting the Aluminum Trimesate-Based MOF (MIL-96): From Structure Determination to the Processing of Mixed Matrix Membranes for CO ₂ Capture" <u>Chem. Mater.</u> , 29 (2017) 10326-10338	Q1	9,980
7.16	68. A. M. Bumstead, D. B. Cordes, D. M. Dawson , K. Chakarova, M. Mihaylov , C. Hobday, T. Düren, K. Hadjiivanov, A. Slawin, S. Ashbrook, R. Prasad, A. Wright, „Modulator-Controlled Synthesis of Microporous STA-26, an Interpenetrated 8,3-Connected Zirconium MOF with the the-iTopology, and its Reversible Lattice Shift“ <u>Chem. – A Eur. J.</u> , 20 (2018) 6115-6126.	Q1	5,16
7.17	69. K. Chakarova, I. Strauss, M. Mihaylov , N. Drenchev, K. Hadjiivanov, "Evolution of acid and basic sites in UiO-66 and UiO-66-NH ₂ metal-organic frameworks: FTIR study by probe molecules" <u>Micropor. Mesopor. Mater.</u> 281 (2019) 110–122	Q1	3,649
7.18	70. R. Prasad, S. Seidner, D.B. Cordes, M. Lozinska, D. Dawson, M. Thompson, T. Düren, K. Chakarova, M. Mihaylov , K. Hadjiivanov, F. Hoffmann, A. Slawin, S.E. Ashbrook, M. Clarke and P. Wright "STA-27, a Porous Lewis Acidic Scandium MOF with an Unexpected Topology Type Prepared with 2,3,5,6-Tetrakis(4-Carboxyphenyl) Pyrazine,, <u>J. Mater. Chem. A</u> , (2019) DOI: 10.1039/c8ta10610j.	Q1	9,931

Приложение към група от показатели 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)

На работа № 27 (24 цитата):

M. Mihaylov, E. Ivanova, Y. Hao, K. Hadjiivanov, H. Knözinger and B. Gates
"Gold Supported on La₂O₃: Structure and Reactivity with CO₂ and Implications for CO Oxidation Catalysis"
J. Phys. Chem., C112 (2008) 18973-18983.

1. Sridhar, M., Brose, S., Siewert, D., Ferri, D., van Bokhoven, J.A., Kröcher, O., (2019) *Applied Catalysis B: Environmental*, 709-718.
2. Wang, X.-L., Fu, X.-P., Wang, W.-W., Ma, C., Si, R., Jia, C.-J., (2019) *Journal of Physical Chemistry C*, 123 (14), 9001-9012.
3. Carabineiro, S.A.C., Martins, L.M.D.R.S., Pombeiro, A.J.L., Figueiredo, J.L., (2018) *ChemCatChem*, 10 (8), 1804-1813.
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6. Wang, G., Zhao, T., Song, M., Wang, C., Liu, H., Qin, Z., (2015) *CrystEngComm*, 17 (35), 6632-6635.
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14. De Almeida, M.P., Carabineiro, S.A.C., (2013) *New and Future Developments in Catalysis: Hybrid Materials, Composites, and Organocatalysts*, 105-121.
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16. Lessard, J.D., Valsamakís, I., Flytzani-Stephanopoulos, M., (2012) *Chemical Communications*, 48 (40), 4857-4859.
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На работа № 30 (13 цитата):

M. Mihaylov, E. Ivanova, Y. Hao, K. Hadjiivanov, B.C. Gates and H. Knözinger
"Oxidation by CO₂ of Au⁰ Species on La₂O₃-Supported Gold Clusters"
Chem. Commun. (2008) 175-177.

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34. Li, M., Wu, Z., Ma, Z., Schwartz, V., Mullins, D.R., Dai, S., Overbury, S.H., (2009) *Journal of Catalysis*, 266 (1), 98-105.
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На работа № 31 (14 цитата):

V. Blasin-Aubé, O. Marie, J. Saussey, M. Daturi, C. Hamon, **M. Mihaylov**, E. Ivanova, K. Hadjiivanov

"Iron Nitrosyl Species in Fe-FER: A Complementary Mössbauer and FTIR Spectroscopy Study"

J. Phys. Chem., C113 (2009) 8387-8393.

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На работа № 32 (74 цитата):

Y. Hao, **M. Mihaylov**, E. Ivanova, K. Hadjiivanov, H. Knözinger and B.C. Gates⁷⁴

"CO Oxidation Catalyzed by Gold Supported on MgO: Spectroscopic Identification of Carbonate-like Species Bonded to Gold during Catalyst Deactivation"

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На работа № 34 (23 цитата):

M. Mihaylov, E. Ivanova, N. Drenchev and K. Hadjiivanov

"Coordination Chemistry of Fe²⁺ Ions in Fe,H-ZSM-5 Zeolite as Revealed by the IR Spectra of Adsorbed CO and NO"

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На работа № 33 (14 цитата):

I. Malpartida, E. Ivanova, **M. Mihaylov**, K. Hadjiivanov, V. Blasin-Aube, O. Marie and M. Daturi

"CO and NO Adsorption for the IR Characterization of Fe²⁺ Cations in Ferrierite: An Efficient Catalyst for NO_x SCR with NH₃ as Studied by Operando IR Spectroscopy"
Catal. Today., 149 (2010) 295-303.

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На работа № 38 (11 цитата):

E. Ivanova, **M. Mihaylov**, K. Hadjiivanov, V. Blasin-Aube, O. Marie, A. Plesniar and M. Daturi
"Evidencing Three Distinct Fe^{II} Sites in Fe-FER Zeolites by Using CO and NO as
Complementary IR Probes"
Appl. Catal., B93 (2010) 325-338.

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На работа № 41 (9 цитата):

M. Mihaylov, E. Ivanova, K. Chakarova, P. Novachka and K. Hadjiivanov
"Reduced Iron Sites in Fe-BEA and Fe-ZSM-5 Zeolites: FTIR study of CO Adsorption and
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Appl. Catal., A391 (2011) 3-10.

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На работа № 43 (34 цитата):

K. Chakarova, **M. Mihaylov**, S. Ivanova, M.A. Centeno and K. Hadjiivanov
 "Well Defined Negatively Charged Gold Carbonyls on Au/SiO₂"
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На работа № 56 (10 цитата):

M.Y. Mihaylov, E.Z. Ivanova, H.A. Aleksandrov, P.St. Petkov, G.N. Vayssilov and K.I. Hadjiivanov

"FTIR and Density Functional Study of NO Interaction with Reduced Ceria: Identification of N₃ and NO₂ as New Intermediates in NO Conversion"

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На работа № 57 (3 цитата):

M.Y. Mihaylov, E.Z. Ivanova, H.A. Aleksandrov, P.St. Petkov, G.N. Vayssilov and K.I. Hadjiivanov

"Formation of N³⁻ During Interaction of NO with Reduced Ceria"

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На работа № 61 (5 цитата):

M. Mihaylov, S. Andonova, K. Chakarova, A. Vimont, E. Ivanova, N. Drenchev and K. Hadjiivanov

"An Advanced Approach for Measuring Acidity of Hydroxyls in Confined Space: FTIR Study of Low-temperature CO and ¹⁵N₂ Adsorption on MOF Samples from the MIL-53(Al) Series"

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На работа № 62 (10 цитата):

M. Mihaylov, K. Chakarova, S. Andonova, N. Drenchev, E. Ivanova, E.A. Pidko, A.Sabetghadam, B. Seoane, J. Gascon, F. Kapteijn, K. Hadjiivanov 10
"Adsorption of CO₂ on MIL-53(Al): FTIR evidence of the formation of dimeric CO₂ species"
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На работа № 64 (5 цитата):

N. Drenchev, **M. Mihaylov**, P. Dietzel, A. Albinati, P. Georgiev and K. Hadjiivanov 5
"Low-Temperature Adsorption of H₂ and D₂ on Dehydrated and Water Precovered CPO-27-Ni"
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На работа № 65 (12 цитата):

M. Mihaylov, K. Chakarova, S. Andonova, N. Drenchev, E. Ivanova, A. Sabetghadam, B. Seoane, J. Gascon, F. Kapteijn and K. Hadjiivanov 12
"Adsorption Forms of CO₂ on MIL-53(Al) and NH₂-MIL-53(Al) as Revealed by FTIR Spectroscopy"
J. Phys. Chem., C120 (2016) 23584-23595.

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На работа № 67 (13 цитата):

M.Y. Mihaylov, **E.Z. Ivanova**, H.A. Aleksandrov, P.S. Petkov, G.N. Vayssilov, **K.I. Hadjiivanov**
Species formed during NO adsorption and NO + O₂ co-adsorption on ceria: A combined FTIR and DFT study.
Molecular Catalysis, 451 (2018) 114-124

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На работа № 68 (2 цитата):

- A. M. Bumstead, D. B. Cordes, D. M. Dawson, K. Chakarova, **M. Mihaylov**, C. Hobday, T. Düren, K. Hadjiivanov, A. Slawin, S. Ashbrook, R. Prasad, A. Wright,³
„Modulator-Controlled Synthesis of Microporous STA-26, an Interpenetrated 8,3-Connected Zirconium MOF with the the-*i*Topology, and its Reversible Lattice Shift“
Chemistry – A European Journal, 20(2018) 6115-6126.
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Приложение към група от показатели Е

14. Участие в национален научен или образователен проект

4.1. Договор ВУХ 303/07 г.

Тема: Целенасочен синтез на нано и субнано клъстери и комплекси на преходни метали в зеолити с потенциално приложение в екологичния катализ
Финансираща организация: ФНИ
Ръководител: проф. дхн Георги Вайсилов; Период: 2007 - 2011 г.

4.2. Договор ДО 02-28 /2008 г.

Тема: Златни наночастици в екологичния катализ: синтез, охарактеризиране и оптимизация
Финансираща организация: ФНИ
Ръководител: проф. дхн Константин Хаджииванов; Период: 2009 - 2010 г.

4.3. Договор ДО 02-184/2008

Тема: Координационна химия на катиони в порести материали: дизайн на нови материали със специфични адсорбционни и каталитични свойства
Финансираща организация: ФНИ
Ръководител: проф. дхн Константин Хаджииванов; Период: 2009 – 2012г.

4.4. Договор ДО 02-82 /2009 (Union)

Тема: Център за върхови научни постижения - Национален център за нови материали
Финансираща организация: ФНИ
Ръководител: Константин Хаджииванов; Период: 2009 – 2012г.

4.5. Договор ДЦВП 02/2

Тема: Доизграждане на Център за върхови научни постижения (UNION-2)
Финансираща организация: ФНИ
Ръководител: Константин Иванов Хаджииванов; Период: 2010 г. – 2013 г.

4.6. Тема: Енергийно ефективни MOF-базирани смесени матрични мембрани за улавяне на CO₂ –съфинансиране

Финансираща организация: МОН
Ръководител: проф. дхн Константин Хаджииванов; Период: 2014 – 2017 г.

4.7. Договор ДН 19/2/2017

Тема: "Адсорбция и конверсия на азотни оксиди върху системи, съдържащи цериев диоксид"
Финансираща организация: ФНИ
Ръководител: проф. дхн Константин Хаджииванов; Период: 2017 – 2020 г.

4.8. Договор BG05M2OP001-1.001-0008-C01

Тема: Национален център по мехатроника и чисти технологии
Финансираща организация: Оперативна програма
Ръководител: проф. Пламен Стефанов; Период: 2018-2023 г.

4.9. Договор Е+

Национална програма "Нисковъглеродна енергия за транспорта и бита"
Финансираща организация: Оперативна програма
Ръководител: Константин Хаджииванов; Период: 2018 г. – 2021 г.

15. Участие в международен научен или образователен проект

15.1. Договор M4CO2

Тема: Енергийно ефективни MOF-базирани смесени матрични мембрани за улавяне на CO₂

Финансираща организация: Европейска комисия (7РП)

Ръководител: проф. д-р Константин Хаджииванов; Период: 2014 – 2017 г.

16. Ръководство на национален научен или образователен проект

16.1. Договор ДО 02-290/2008 г.

Тема: Дизайн и изследвания на молекулно ниво на нанесени метални клъстери с предварително зададени свойства

Ръководител: Михаил Михайлов; Период: 2010 – 2012 г.

Постъпили средства: 202 500 лв.

16.2. Договор Т 02-20/12.2014

Тема: Порести материали като адсорбенти за пречистване на горивата на бъдещето /метан и водород/

Ръководител: Доц. д-р Михаил Михайлов, Период: 2014 – 2016 г.

Постъпили средства: 195 000 лв.

18. Привлечени средства по проекти, ръководени от кандидата

18.1. Тема: IR Spectroscopic Investigations of Supported Metal Clusters

финансиран от фондация А. фон Хумболт за закупуване на ИЧ спектрометър.

Ръководител: доц. д-р Михаил Михайлов; Период: 2006 г.

Постъпили средства: 38 948 лв.

18.2. Договор ДО 02-290/2008

Тема: Дизайн и изследвания на молекулно ниво на нанесени метални клъстери с предварително зададени свойства

Ръководител: доц. д-р Михаил Михайлов; Период: 2010 – 2012 г.

Постъпили средства: 202 500 лв.

18.3. Договор Т 02-20/2014

Тема: Порести материали като адсорбенти за пречистване на горивата на бъдещето /метан и водород/

Ръководител: доц. д-р Михаил Михайлов, Период: 2014 – 2016 г.

Постъпили средства: 195 000 лв.