

**Ing. Pavel Diko, DrSc.****academician SLS**

Institute of Experimental Physics

Watsonova 47, 040 01 Košice

tel.: +421 55 7922272

E-mail: [dikos@saske.sk](mailto:dikos@saske.sk)URL: <http://www.saske.sk>**Current position(s):**

Senior Researcher

Head of the Laboratory of Materials Physics

**Profile:**

Ing. Pavel Diko, DrSc., patrí k popredným vedeckým osobnostiam v oblasti výskumu a vývoja masívnych supravodičov vo svete. Na Ústave experimentálnej fyziky SAV pôsobí 41 rokov. Zastával funkciu vedúceho Oddelenia fyziky kovov, vedúceho Laboratória materiálovej fyziky. Je garantom doktorandského štúdia v odbore Materiály na ÚEF SAV. Prednášal na univerzitách a vedeckých ústavoch na Slovensku, v Rakúsku, Japonsku, Číne, USA, Francúzku, Anglicku, Taiwane a J. Kórei.

Na domácom pracovisku koordinoval projekty rámcových programov EÚ, a tiež množstvo medzinárodných a domácich projektov. Bol jedným z iniciátorov vzniku Centra excelentnosti NANOSMART, Centra excelentnosti progresívnych materiálov s nano a submikrónovou štruktúrou a Výskumného centra progresívnych materiálov a technológií – PROMATECH.

Je spoluautorom viac ako 200 vedeckých publikácií, ktoré boli citované viac ako 1200 krát, 21 vyzvaných prednášok v zahraničí, 2 patentov (h-index: 18). Je Executive Board Member časopisu Ceramic Science and Engineering a spolueditorom v IEEE Transactions on Applied Superconductivity.

**Experience:**

1977 - doteraz Ústav experimentálnej fyziky SAV  
2012 Shibaaura Institut of Technology, Tokyo, JSPS fellowship  
2005 University of Cambridge, Royal Society s fellowship  
1997 Argon National Laboratory, University of Chicago, Fulbright Fellowship  
1996 International Superconductivity Technology Center, Tokyo, JSPS fellowship  
1995 Material Science Department, Oxford University, Royal Society fellowship  
1994 IPHT Jena, DAAD fellowship

**Organisation of Scientific Meetings:**

2017 Member of International Advisory Committee, Session chair, Guest editor for 10th International Workshop on the Processing and Applications of Superconducting (RE)BCO Large Grain Materials, including MgB<sub>2</sub>, PASREG, 11-12 December 2017, Tokyo, Japan  
2016 Member of International Scientific Committee, International Symposium on Metallography and Material Science (Metallography 2013), April 20-22, 2016, Stará Lesná, Slovak Republic  
2014 Member of International Advisory Committee, 9th PASREG, 3-4 September 2014, Liege, Belgium  
2013 Member of International Scientific Committee, International Symposium on Metallography (Metallography 2013), April 24-26, 2016, Stará Lesná, Slovak Republic  
2012 Member of International Advisory Committee 8th PASREG, December 6-8 2012,

2010, Tainan, Taiwan.  
Member of International Advisory Committee, 7th PASREG 2010, 29–31 July 2010, Washington DC, USA.

**Projects:**

1. MYBCO Pr. No. 60439-4838, ÚEF SAV - Argonne National Laboratory, 06/1995 - 12/1999 – head of the project, *supported by USA Department of Energy a Slovak Agency for Strategy of Society, Science and Technology.*
2. NESPA., NanoEngineered Superconductors for Power Applications, 10/2006-9/2010 - head of the project at IEP SAS, *supported by 6-th Framework Program, Marie Currie Training Network.*
3. EFFORT, Pr. No. GR/T17496/01, The European Forum for Processors of Large Grain (RE)BCO, 2001-2007 - head of the project at IEP SAS, *supported by UK government and European Commission.*
4. NMTE - New materials and technologies for energetics, ŠF ITMS 26220220061, 2010-2019 - head of the project, *project supported by the OP EU 2007-2013 programming period of the OPRD.*
5. MS2G Research and Development of Second Generation of Bulk YBCO Superconductors, ŠF ITMS 26220220041, 2009-2018 - head of the project, *project supported by the OP EU 2007-2013 programming period of the OPRD.*

**Five representative publications:**

Researcher ID (in SCOPUS): **7004980838**

1. P. Diko, Growth-related microstructure of meltgrown REBa<sub>2</sub>Cu<sub>3</sub>O<sub>y</sub> bulk superconductors Superconductor Science and Technology 2000, 13(8), pp. 1202-1213. IF: 2,85. Q1. ADC, Citácie: 68
2. P. Diko, S. Piovarči, V. Antal, M. Kaňuchová and D. Volochová, Corrosion of YBCO bulk superconductor in air, Journal of the American Ceramic Society 101(8), pp. 3703-3709 IF: 2,83. Q1. ADC, Citácie: 01
3. Diko, P., Gawalek, W., Habisreuther, T., Klupsch, T., Görnert, P., Influence of Y<sub>2</sub>BaCuO<sub>5</sub> particles on the microstructure of YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-x</sub> (123)-Y<sub>2</sub>BaCuO<sub>5</sub> (211) melt textured superconductors, Physical Review B, 1995, 52(18), pp. 13658 -13664. IF: 3,84. Q1. ADC, Citácie: 44
4. Diko, P., Fuchs, G., Krabbes, G. Influence of silver addition on cracking in melt-grown YBCO Physica C: Superconductivity and its Applications, 2001, 363(1), pp. 60-66. IF: 1,4. Q1. ADC, Citácie: 31
5. P. Diko, Cracking in melt-grown RE-Ba-Cu-O single grain bulk superconductors Superconductor Science and Technology 2004. 17(11), pp. R45-R58, IF: 2,85. Q1. ADC, Citácie: 44

**Patents:**

1. Patent DE10307643A1 09.09.2004, Shlyk L, Krabbes, G, Diko P. Hochtemperatursupraleitender Körper und Verfahren zu dessen Herstellung.
2. Patent No. 288468: P. Diko, D. Volochová, Binárne dopovaný monokryštalický supravodič. 2017.
3. Patent application: PP 00089-2015 : P. Diko, D. Volochová, V. Antal, S. Piovarči, YBCO superconductor doped with samarium and its fabrication.
4. Patent CS271520, J. Kral, D. Liška, M. Ferdinandy, P. Diko, Method of TiAl<sub>3</sub> diffusion layer formation on titanium and its alloys.
5. Patent CS268564, V. Hajko, P. Diko, K. Csach, S. Molokač, Method of superconductor preparation with critical temperature above 30 K.

**Fellowships / Awards / Memberships of Scientific Societies:**

1. Award of the PASREG (BCO Large Grain Materials) Award for Excellent Contribution to the Research and Application of Bulk REBCO Superconductors.
2. Aurel Stodole's Silver Medal for Contribution to Physical and Chemical Sciences, 1997.
3. Extra remuneration of SAV 2005 for the work "Crystal defects in REBCO massive superconductors"
4. The price of SAS for a set of scientific papers in the field of study of intermetallic compounds Sm-Co.
5. Price of SAS for a set of scientific works in the area of study of deformation and fracture of metallic glasses (1985).
6. Fulbright Fellowship, JSPS Fellowship, Royal Society Fellowship, 1998 DAAD Fellowship
7. A regular member of the SAS Learned Society
8. Member of the CSAS College for Material Research
9. Member of SAS College for Materials and Electrotechnics
10. Guarantor of Doctoral Studies in Materials at IEP SAS
11. Member of the Committee for the Defense of Doctoral Dissertations at TU Košice and UPJŠ Košice.