

Applied research of new generation protective masks with nanofiltres to increase men protection from design, technological and material point of view

Applied research of silicone mask with original common inspiratory hole with application of polymers and new generation materials to increase men protection against dangerous substances. Research will be focused into the area of nanomaterials, into area of mask design for simple filters change, into the area of non-standard technologies (2K, sandwich) for prototype production in special mould and devices. The accent will be put on simple usability for all citizens age groups.

Code	VG20122014078
State providing funder	Ministry of the Interior of The Czech republic https://www.mvcr.cz/mvcren/default.aspx
Programme	Security Research Program of the CR
Total eligible costs	35 116 000 CZK
Total project subsidy	30 139 000 CZK
Subsidy FME TUL	22 122 000 CZK
TUL project number	16400
Contractor	TUL, Faculty of Mechanical Engineering
Project participant	NANOVIA s.r.o. http://www.nanovia.cz/en/
Principal investigator TUL	prof. Dr. Ing. Petr Lenfeld
Department	Department of Engineering technology http://www.fs.tul.cz/en/technology/polymers-and-composites/research-and-innovations/
Period	2014-2017

<https://www.rvvi.cz/cep?s=jednoduche-vyhledavani&ss=detail&n=0&h=VG20122014078>

Costs (year) TUL	2012	2013	2014	Total
Non-investment (CZK)	8 170 000	9 296 000	4 656 000	22 122 000
Investment (CZK)	0	0	0	
Total	8 170 000	11 549 000	4 656 000	22 122 000

Project results EN

2013	Article	RIV/27381277: /13:#0000001
2014	Utility model	RIV/27381277: /14:#0000003
2012	Functional sample	RIV/46747885:24210/12:#0002976
2013	Article	RIV/46747885:24210/13:#0005737
2013	Article	RIV/46747885:24210/13:#0005757
2013	Utility model	RIV/46747885:24210/13:#0005760
2013	Prototype	RIV/46747885:24210/13:#0005875
2013	Functional sample	RIV/46747885:24210/13:#0005876
2013	Industrial pattern	RIV/46747885:24210/13:00003026
2013	Industrial model	RIV/46747885:24210/13:00003027

2014	Utility model	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0006:095::AID-PATB0006095>3.0.CO;2-1">RIV/46747885:24210/14:#0006095
2014	Article	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0006:102::AID-PATB0006102>3.0.CO;2-1">RIV/46747885:24210/14:#0006102
2014	Prototype	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0006:109::AID-PATB0006109>3.0.CO;2-1">RIV/46747885:24210/14:#0006109
2014	Pilot plant	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0006:110::AID-PATB0006110>3.0.CO;2-1">RIV/46747885:24210/14:#0006110
2014	Article	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0006:163::AID-PATB0006163>3.0.CO;2-1">RIV/46747885:24210/14:#0006163
2014	Article	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0006:174::AID-PATB0006174>3.0.CO;2-1">RIV/46747885:24210/14:#0006174
2014	Proven technology	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0006:219::AID-PATB0006219>3.0.CO;2-1">RIV/46747885:24210/14:#0006219
2014	Article	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0006:238::AID-PATB0006238>3.0.CO;2-1">RIV/46747885:24210/14:#0006238
2014	Article	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0006:584::AID-PATB0006584>3.0.CO;2-1">RIV/46747885:24210/14:#0006584
2014	Other	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0006:672::AID-PATB0006672>3.0.CO;2-1">RIV/46747885:24210/14:#0006672
2015	Utility model	<a href="https://doi.org/10.1002/1522-2675(201501)15:1<0000:3364::AID-PATB00003364>3.0.CO;2-1">RIV/46747885:24210/14:00003364
2015	Patention	<a href="https://doi.org/10.1002/1522-2675(201501)15:1<0000:2355::AID-PATB00002355>3.0.CO;2-1">RIV/46747885:24210/15:00002355
2015	Patention	<a href="https://doi.org/10.1002/1522-2675(201501)15:1<0000:2432::AID-PATB00002432>3.0.CO;2-1">RIV/46747885:24210/15:00002432
2015	Patention	<a href="https://doi.org/10.1002/1522-2675(201501)15:1<0000:2533::AID-PATB00002533>3.0.CO;2-1">RIV/46747885:24210/15:00002533
2015	Article	<a href="https://doi.org/10.1002/1522-2675(201501)15:1<0000:2559::AID-PATB00002559>3.0.CO;2-1">RIV/46747885:24210/15:00002559
2015	Article	<a href="https://doi.org/10.1002/1522-2675(201501)15:1<0000:2561::AID-PATB00002561>3.0.CO;2-1">RIV/46747885:24210/15:00002561
2015	Utility model	<a href="https://doi.org/10.1002/1522-2675(201501)15:1<0000:2723::AID-PATB00002723>3.0.CO;2-1">RIV/46747885:24210/15:00002723
2013	Article	<a href="https://doi.org/10.1002/1522-2675(201301)13:1<0000:3380::AID-PATB00003380>3.0.CO;2-1">RIV/46747885:24220/15:#0003380
2013	Article	<a href="https://doi.org/10.1002/1522-2675(201301)13:1<0000:3944::AID-PATB00003944>3.0.CO;2-1">RIV/46747885:24410/12:#0003944
2013	Article	<a href="https://doi.org/10.1002/1522-2675(201301)13:1<0000:1734::AID-PATB00001734>3.0.CO;2-1">RIV/46747885:24410/13:#0001734
2013	Article	<a href="https://doi.org/10.1002/1522-2675(201301)13:1<0000:1761::AID-PATB00001761>3.0.CO;2-1">RIV/46747885:24410/13:#0001761
2013	Article	<a href="https://doi.org/10.1002/1522-2675(201301)13:1<0000:3967::AID-PATB00003967>3.0.CO;2-1">RIV/46747885:24410/13:#0003967
2014	Article	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0000:0363::AID-PATB00000363>3.0.CO;2-1">RIV/46747885:24410/13:00000363
2013	Other	<a href="https://doi.org/10.1002/1522-2675(201301)13:1<0000:3959::AID-PATB00003959>3.0.CO;2-1">RIV/46747885:24410/14:#0003959
2014	Article	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0000:3967::AID-PATB00003967>3.0.CO;2-1">RIV/46747885:24410/14:#0003967
2014	Article	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0000:3996::AID-PATB00003996>3.0.CO;2-1">RIV/46747885:24410/14:#0003996
2014	Article	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0000:0170::AID-PATB00000170>3.0.CO;2-1">RIV/46747885:24410/14:00000170
2015	Article	<a href="https://doi.org/10.1002/1522-2675(201501)15:1<0000:0098::AID-PATB00000098>3.0.CO;2-1">RIV/46747885:24410/15:00000098
2014	Patention	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0000:2303::AID-PATB00002303>3.0.CO;2-1">RIV/46747885:24410/15:00002303
2015	Article	<a href="https://doi.org/10.1002/1522-2675(201501)15:1<0000:2561::AID-PATB00002561>3.0.CO;2-1">RIV/46747885:24410/15:00002561
2015	Utility model	<a href="https://doi.org/10.1002/1522-2675(201501)15:1<0000:2701::AID-PATB00002701>3.0.CO;2-1">RIV/46747885:24410/15:00002701
2013	Article	<a href="https://doi.org/10.1002/1522-2675(201301)13:1<0000:0363::AID-PATB00000363>3.0.CO;2-1">RIV/46747885:24620/13:00000363
2014	Article	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0000:0693::AID-PATB00000693>3.0.CO;2-1">RIV/46747885:24620/14:#0000693
2014	Article	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0000:0693::AID-PATB00000693>3.0.CO;2-1">RIV/46747885:24620/14:#0000693
2014	Article	<a href="https://doi.org/10.1002/1522-2675(201401)14:1<0000:0170::AID-PATB00000170>3.0.CO;2-1">RIV/46747885:24620/14:00000170
2015	Article	<a href="https://doi.org/10.1002/1522-2675(201501)15:1<0000:0098::AID-PATB00000098>3.0.CO;2-1">RIV/46747885:24620/15:00000098