ANEXA nr. 2: CERERE-TIP pentru susţinerea tezei de abilitare

Universitatea POLITEHNICA din Bucuresti

Avizat

Rector,

Mihnea COSTOIU

MINISTERUL EDUCAŢIEI SI CERCETĂRII
UNIVERSITATEA POLITEHNICA DIN BUCUREŞTI
REGISTRATURĂ
INTRARE 3375
20 20 LUNA 02 ZIUA 26

ÎNDEPLINIRE STANDARDE MINIMALE

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CERERE-TIP pentru susţinerea tezei de abilitare

Domnule Rector

Subsemnatul Ciprian Iliescu, cercetator in cadrul Institutului National de Cercetare-Dezvoltare pentru Microtehnologie., solicit prin prezenta susţinerea tezei de abilitare cu titlul **„Micro- and Nano-technologies for Chemical Engineering"** în domeniul de studii universitare de doctorat **„Inginerie Chimică"**.

Solicit ca procedura de abilitare în domeniul fundamental **ştiinţe ingineresti**, domeniul de studii universitare de doctorat **„Inginerie Chimică"**, să se desfăşoare în cadrul **Universitatăţii POLITEHNICA din Bucureşti, Facultatea de Chimie Aplicată şi Stiinţa Materialelor** .

Declar pe propria răspundere că informaţiile prezentate în această cerere şi în dosarul de abilitare corespund realităţii.

18.02.2020

Standard minimal profesor – Comisia 8 – CNATDCU
îndeplinit cantitativ. Comisia de abilitare
va certifica îndeplinirea calitativă, în acord
cu specificul domeniului de abilitare
Cancelar Senat UPB
Prof. I. Popescu

verificat pentru conformitate cu originalul

Îndeplinirea standardelor minimale necesare și obligatorii pentru conferirea titlui de cercetator științific 1

Comisia de inginerie chimică, inginerie medicală, ştiinţa materialelor şi nanomateriale

CRITERIUL 1: NTOP– Numărul total de articole în reviste ISI situate în top 25% în calitate de autor principal

Condiție: NTOP= 4

Numar total articole NTOP=16

1. H. Zhu, P. Podesva, X. Liu, H. Zhang, T. Teply, Y. Xu, H. Chang, A. Qian, Y. Lei, Y. Li, A. Niculescu, C. Iliescu, * P.Neuzil, "IoT PCR for Pandemic Disease Detection and Its Spread Monitoring" *Sensors and Actuators B: Chemical,* **vol. 303**, 2020, 127098. (IF=6.393; WOS:000500370900013, 7 pages)
2. H. Zhang, Y. Xu, Z. Fohlerova, H-L. Chang, C. Iliescu,* and P. Neuzil, "LAMP-on-a-chip: revising microfluidic platforms for loop-mediated DNA amplification," *Trends in Analytical Chemistry,* **vol. 113,** 2019, pp. 44-53. (IF=8.428; WOS:000461894400005; 10 pages)
3. F. Yu, R. Deng, W.H. Tong, L. Huan, N. C. Way, A.I. Badhan, C. Iliescu,* H. Yu, "A perfusion incubator liver chip for 3D cell culture with application on chronic hepatotoxicity testing," *Scientific Reports*, **vol. 7**, 2017, art.no: 14528. **(IF=4.011; WOS:000414415000028; 16 pages)**
4. M. Ni, G. Tresset, C. Iliescu,* Self-assembled polysulfone nanoparticles using microfluidic chip" *Sensors and Actuators B: Chemical,* **vol. 252 (2),** 2017, pp. 458-462. (IF=6.393; WOS:000408277500053; 5 pages)
5. W.H. Tong, F. Yu, J. Yan, X. Hong, N.H. Singh, S.R. Wang, B. Nugraha, L. Xia, E.L.S. Fong, C. Iliescu,* and H. Yu, "Constrained spheroids for prolonged hepatocyte cell culture," *Biomaterials*, **vol. 80,** 2016, pp. 106-120. (IF=10.273; WOS:000370094900010; 15 pages)
6. C. Iliescu* and G. Tresset "Microfluidics-driven strategy for size-controlled DNA compaction by slow diffusion through water stream," *Chemistry of Materials,* **vol. 27 (24),** 2015, pp. 8193-8197. (IF=10.159; WOS:000367562000005; 5 pages)
7. C. Iliescu,* C. Mărculescu, S. Venkataraman, B. Languille, H. Yu and G. Tresset "On-chip controlled surfactant–DNA coil–globule transition by rapid solvent exchange using hydrodynamic flow focusing," *Langmuir*, **vol. 30 (44),** 2014, pp. 13125-13136. (IF=3.683; WOS:000344905100002; 12 pages)
8. G. Tresset, C. Marculescu, A. Salonen, M. Ni, C. Iliescu,* "Fine control over the size of surfactant- polyelectrolyte nanoparticles by hydrodynamic flow focusing," *Analytical Chemistry,* **vol. 85, (12),** 2013, pp. 5850-5856. (IF=6.35; WOS:000320749200035; 7 pages)
9. B. Chen, J. Wei, C. Iliescu*, "Sonophoretic enhanced microneedles array (SEMA) - improving the efficiency of transdermal drug delivery," *Sensors and Actuators B: Chemical,* **vol. 145 (1)**, 2010, pp. 54-60. (IF=6.393; WOS:000275763100009; 7 pages)
10. C. Iliescu,* L.M. Yu, F.E.H. Tay and B.T. Chen, "Bidirectional field flow particle separation method in a dielectrophoretic chip with 3D electrodes," *Sensors and Actuators B: Chemical,* **vol. 129, (1)**, 2008, pp. 491-496. (IF=6.393; WOS:000253172500071; 6 pages)
11. C. Iliescu,* B.T. Chen, D.P. Poenar and Y.Y. Lee, "PECVD amorphous Silicon Carbide membranes for cell culturing," *Sensors and Actuators B: Chemical,* **vol. 129 (1)**, 2008, pp. 404-411. (IF=6.393; WOS:000253172500060; 8 pages)
12. C. Iliescu,* G. Tresset and G.L. Xu, "Continuous field-flow separation of particle populations in a dielectrophoretic chip with three dimensional electrodes," *Applied Physics Letters,* **vol. 90 (23)**, 2007, pp. 234104/1-3. (IF=3.521; WOS:000247145500098; 3 pages
13. C. Iliescu,* D.P. Poenar, M. Carp and F.C. Loe, "A microfluidic device for impedance spectroscopy analysis of biological samples," *Sensors and Actuators B: Chemical* **vol. 123 (1),** 2007, pp. 168-176. (IF=6.393; WOS:000246171200026; 9 pages)
14. C. Iliescu,* M. Carp, J. Miao, F.E.H. Tay and D.P. Poenar, "Analyze of high boron doping from spin on diffusing source," *Surface and Coatings Technology,* **vol. 198, issue (1-3)**, 2005, pp. 309-313. (IF=3.192; WOS:000230419400065; 5 pages)
15. C. Iliescu,* J. Jing, F.E.H. Tay, J. Miao and T.T. Sun, "Characterization of masking layers for deep wet etching of glass in an improved HF/HCl solution," *Surface and Coatings Technology,* **vol. 198 (1-3)**, 2005, pp. 314-318. . (IF=3.192; WOS:000230419400066; 5 pages)
16. C. Iliescu, J. Miao and F.E.H. Tay, "Optimization of PECVD amorphous silicon process for deep wet etching of Pyrex glass," *Surface and Coatings Technology*, **vol. 192 (1)**, 2005, pp. 43-47. (IF=3.192; WOS:000226262300006; 5 pages)

CRITERIUL 2: Factorul de imact cumulat

Condiție minimă: FIC>30
Factorul de impact cumulat: 170.699

Factorul de impact cumulat al articolelor ca autor principal:

Nr.	Articol	Factor de impact	Punctaj
1	H. Zhu, P. Podesva, X. Liu, H. Zhang, T. Teply, Y. Xu, H. Chang, A. Qian, Y. Lei, Y. Li, A. Niculescu, C. Iliescu, * P.Neuzil, "IoT PCR for Pandemic Disease Detection and Its Spread Monitoring" *Sensors and Actuators B: Chemical,* vol. 303, 2020, 127098	6.393	6.393
2	F.S. Iliescu, D.P. Poenar, F. Yu, M. Ni, K.H. Chan, I. Cima, H. Taylor, I. Cima, C. Iliescu,* "Recent advances in microfluidics methods in cancer liquid biopsy", *Biomicrofluidics*, vol. 13, issue 4, art. no. 041503, 2019	2.531	2.531
3	F.S. Iliescu, D. Vrtačnik, P. Neuzil, C. Iliescu,* "Microfluidic technology for clinical applications of exosomes" *Micromachines*, vol. 10, issue 6,2019, art. no. 392,	2.426	2.426
4	F.S. Iliescu, W.J. Sim, H. Heidari, D.P. Poenar, J. Miao, H.K. Taylor, C. Iliescu,* "Highlighting the uniqueness in dielectrophoretic enrichment of circulating tumor cells," *Electrophoresis,* 2019, vol.40, issue 10, 2019, pp. 1457-1477.()	2.754	2.754
5	H. Zhang, Y. Xu, Z. Fohlerova, H-L. Chang, C. Iliescu,* and P. Neuzil, "LAMP-on-a-chip: revising microfluidic platforms for loop-mediated DNA amplification," *Trends in Analytical Chemistry,* vol. 113, 2019, pp. 44-53.	8.428	8.428
6	F.S. Iliescu, J.C.M. Teo, D. Vrtacnik, H. Taylor and C. Iliescu,* "Cell therapy using an array of ultrathin hollow microneedles," *Microsystem Technologies,* vol. 24 (7), 2018, pp. 2905-2912	1.513	1.513
7	M. Ni, G. Tresset, C. Iliescu, Self-assembled polysulfone nanoparticles using microfluidic chip" *Sensors and Actuators B: Chemical,* vol. 252 (2), 2017, pp. 458-462.	6.393	6.393
8	F. Yu, R. Deng, W.H. Tong, L. Huan, N. C. Way, A.I. Badhan, C. Iliescu,* H. Yu, "A perfusion incubator liver chip for 3D cell culture with application on chronic hepatotoxicity testing," *Scientific Reports*, vol. 7, 2017, art. no: 14528.	4.011	4.011
9	F. Yu, S. Zhou, Y. Qu, D. Choudhury, Z. Wang, C. Iliescu,* H. Yu, "On chip two-photon metabolic imaging for drug toxicity testing," *Biomicrofluidics*, vol. 11 (3), May 2017, art. no. 034108.	2.531	2.531
10	F. Yu, F.S. Iliescu, C. Iliescu, "A comprehensive review on perfusion cell culture systems" *Inf. Midem* - J. *Microelectron. Electron. Compon. Mater.*, vol. 46 (4), 2016, pp. 163-175.	0.356	0.356
11	G. Tresset, C. Iliescu, " Microfluidics-Directed Self-Assembly of DNA-Based Nanoparticles*" Inf. Midem - J. Microelectron. Electron. Compon. Mater.,* vol. 46 (4), 2016, pp. 183-189.	0.356	0.356
12	W.H. Tong, F. Yu, J. Yan, X. Hong, N.H. Singh, S.R. Wang, B. Nugraha, L. Xia, E.L.S. Fong, C. Iliescu,* and H. Yu, "Constrained spheroids for prolonged hepatocyte cell culture," *Biomaterials*, vol. 80, 2016, pp. 106-120.	10.273	10.273
13	C. Iliescu* and G. Tresset "Microfluidics-driven strategy for size-controlled DNA compaction by slow diffusion through water stream," *Chemistry of Materials,* vol. 27 (24), 2015, pp. 8193-8197	10.159	10.159
14	C. Iliescu,* G. Xu, W.H. Tong, F. Yu, C.M. Bălan, G. Tresset and H. Yu "Cell patterning using a dielectrophoretic–hydrodynamic trap," *Microfluidics and Nanofluidics,* vol. 19 (2), 2015, pp. 363-373.	2.437	2.437
15	C. Iliescu,* C. Mărculescu, S. Venkataraman, B. Languille, H. Yu and G. Tresset "On-chip controlled surfactant–DNA coil–globule transition by rapid solvent exchange using hydrodynamic flow focusing," *Langmuir*, vol. 30 (44), 2014, pp. 13125-13136.	3.683	3.683
16	D. P. Poenar, C. Iliescu, J. Boulaire, H. Yu, "Label-free virus identification and characterization using electrochemical impedance spectroscopy," *Electrophoresis*, vol. 35 (2-3), 2014, pp. 433-440.	2.754	2.754
17	G. Tresset, C. Marculescu, A. Salonen, M. Ni, C. Iliescu, "Fine control over the size of surfactant-polyelectrolyte nanoparticles by hydrodynamic flow focusing," *Analytical Chemistry,* vol. 85 (12), 2013, pp. 5850-5856.	6.35	6.35
18	I. Cima, C.W. Yee, F.S. Iliescu, W.M. Phyo, T. Lim, C. Iliescu, M.H. Tan "Label-free isolation of circulating tumor cells in microfluidic devices: current research and perspectives," *Biomicrofluidics*, vol. 7 (1), 2013, art. no. 011810.	2.531	2.531
19	C. Iliescu,* H. Taylor, M. Avram, J. Miao, S. Franssila, "A practical guide for the fabrication of microfluidic devices using glass and silicon," *Biomicrofluidics*, vol. 6 (1), 2012, art. no. 016505	2.531	2.531
20	C. Iliescu, M. Avram, B. Chen, A. Popescu, V. Dumitrescu, D. P. Poenar, A. Sterian, D. Vrtacnik, S. Amon, P. Sterian, "Residual stress in thin films PECVD depositions: a review," *Journal of Optoelectronics and Advanced Materials*, vol. 10 (4), 2011, pp. 387-394.	0.588	0.588
21	G.L. Xu, F.E.H. Tay, G. Tresset, F.S. Iliescu, A. Avram, C. Iliescu, "Recent trends in dielectrophoresis", *Inf. Midem - J. Microelectron. Electron. Compon. Mater.,* vol. 40 (4), 2010, pp. 253-262.	0.356	0.356
22	B. Chen, J. Wei, C. Iliescu, "Sonophoretic enhanced microneedles array (SEMA) - improving the efficiency of transdermal drug delivery," *Sensors and Actuators B: Chemical,* vol. 145 (1), 2010, pp. 54-60.	6.393	6.393
23	C. Iliescu,* D.P. Poenar, S. T. Selvan, "Frequency dependence on the accuracy of electrical impedance spectroscopy measurements in microfluidic devices," *Journal of Micromechanics and Microengineering,* vol. 20 (2), 2010, art. no. 022001.	2.141	2.141
24	C. Iliescu,* G. Tresset, L. Yu, G. Xu, "3D dielectrophoretic chips : trapping and separation of cell populations," *Romanian Journal of Information Science and Technology (ROMJIST)*, vol. 13(1), 2010, pp. 49-64.	0.661	0.661
25	C. Iliescu,* G. Tresset, F.S. Iliescu, P.E. Sterian, "Live/dead cell assay based on dielectrophoresis on a chip," *UPB Scientific Bulletin-Series A-Applied Mathematics & Physics,* vol. 72(1), 2010, pp. 33-42.	0.478	0.478
26	M. Ni, W. H. Tong, D. Choudhury, N. A. A. Rahim, C. Iliescu* and H. Yu, "Cell culture on MEMS platforms: a review," *International Journal of Molecular Sciences*, vol. 10 (12), 2009, pp. 5411-5441.	4.183	4.183

27	C. Iliescu,* G. Tresset, G.L. Xu, "Dielectrophoretic field-flow method for separating particle populations in a chip with asymmetric electrodes," *Biomicrofluidics,* vol. 3 (4), 2009, 044104.	2.531	2.531
28	C. Iliescu,* G.L. Xu, E. Barbarini, M. Avram, A. Avram, "Microfluidic device for continuous magnetophoretic separation of white blood cells," *Microsystem Technologies,* vol. 15 (8), 2009, pp. 1157-1162.	1.513	1.513
29	F.S. Iliescu, A.R. Sterian, E. Barbarini, M. Avram, C. Iliescu,* "Continuous separation of white blood cells from blood in a microfluidic device," *UPB Scientific Bulletin-Series A-Applied Mathematics & Physics,* vol. 71 (4), 2009, pp. 21-30.	0.478	0.478
30	C. Iliescu,* B. Chen, J. Wei and A.J. Pang, "Characterization of silicon carbide films deposited by Plasma Enhanced Chemical Vapor Deposition," *Thin Solid Films,* vol. 516 (16), 2008, pp. 5189-5193.	1.888	1.888
31	C. Iliescu, B.T. Chen, J.M. Miao, "On the wet etching of Pyrex glass," *Sensors and Actuators A,* vol. 143 (1), 2008, pp. 154-161.	2.739	2.739
32	C. Iliescu,* B.T. Chen, D.P. Poenar and Y.Y. Lee, "PECVD amorphous Silicon Carbide membranes for cell culturing," *Sensors and Actuators B: Chemical,* vol. 129, 2008, pp. 404-411.	6.393	6.393
33	C. Iliescu,* L.M. Yu, F.E.H. Tay and B.T. Chen, "Bidirectional field flow particle separation method in a dielectrophoretic chip with 3D electrodes," *Sensors and Actuators B: Chemical,* vol. 129, 2008, pp. 491-496.	6.393	6.393
34	C. Iliescu* and B.T. Chen, "Thick and low stress PECVD amorphous silicon for MEMS applications," *Journal of Micromechanics and Microengineering,* vol. 18 (1), 2008, pp. 15024(1-8).	2.141	2.141
35	C. Iliescu,* J. Wei, B. Chen and P.L. Ong, "Silicon nitride membranes for cell culturing," *Romanian Journal of Information Science and Technology (ROMJIST)*, vol. 11 (2), 2008, pp. 167-176.	0.661	0.661
36	C. Iliescu,* G.L. Xu, P.L. Ong and K.J. Leck, "Dielectrophoretic separation of biological samples in a 3D filtering-chip," *Journal of Micromechanics and Microengineering*, vol. **17 (7),** 2007, pp. S128-S136.	2.141	2.141
37	C. Iliescu,* G. Tresset and G.L. Xu, "Continuous field-flow separation of particle populations in a dielectrophoretic chip with three dimensional electrodes," *Applied Physics Letters,* vol. 90 (23), 2007, pp. 234104/1-3.	3.521	3.521
38	C. Iliescu,* D.P. Poenar, M. Carp and F.C. Loe, "A microfluidic device for impedance spectroscopy analysis of biological samples," *Sensors and Actuators B: Chemical* vol. 123 (1), 2007, pp. 168-176	6.393	6.393
39	C. Iliescu,* G.L. Xu, F.C. Loe, P.L. Ong and F.E.H. Tay, "A 3-D dielectrophoretic filter chip," *Electrophoresis*, vol. 28 (7), 2007, pp. 1107-1114**.**	2.754	2.754
40	C. Iliescu,* F.E.H. Tay and J. Miao, "Strategies in deep wet etching of Pyrex glass," *Sensors and Actuators A: Physical,* vol. 133 (2), 2007, pp. 395-400.	2.739	2.739
41	C. Iliescu,* "Microfluidics in glass: technologies and applications," *Inf. Midem - J. Microelectron. Electron. Compon. Mater.,* vol. 36 (4), 2006, pp. 204-211.	0.356	0.356
42	C. Iliescu,* L.M. Yu, G.L. Xu and F.E.H. Tay, "A dielectrophoretic chip with a 3D electric field gradient," *Journal of Microelectromechanical Systems (JMEMS)*, vol. 15, no. 6, 2006, pp. 1506-1513.	2.621	2.621
43	F.E.H. Tay, C. Iliescu,* J. Jing and J. Miao, "Defect-free wet etching through Pyrex glass using Cr/Au mask," *Microsystem Technologies*, vol. 12, no. 10-11, 2006, pp. 935-939.	1.513	1.513
44	C. Iliescu,* F.E.H. Tay, G.L. Xu, L. Yu and V. Samper, "A dielectrophoretic chip packaged at wafer level," *Microsystem Technologies*, vol. 12, (10-11), 2006, pp. 987-992.	1.513	1.513
45	C. Iliescu,* F.E.H. Tay and J. Wei, "Low stress and high deposition rate of PECVD - SiN_x layers using high power and high frequency for MEMS applications," *Journal of Micromechanics and Microengineering*, vol. 16 (4), 2006, pp. 869-874.	2.141	2.141
46	C. Iliescu,* M. Carp, J. Miao, F.E.H. Tay, D.P. Poenar, "Analyze of high boron doping from spin on diffusing source," *Surface and Coatings Technology,* vol. 198, issue 1-3, 2005, pp. 309-313	3.192	3.192
47	C. Iliescu,* J. Jing, F.E.H. Tay, J. Miao, T.T. Sun, "Characterization of masking layers for deep wet etching of glass in an improved HF/HCl solution," *Surface and Coatings Technology,* vol. 198, 2005, pp. 314-318.	3.192	3.192
48	C. Iliescu,* G.L. Xu, V. Samper and F.E.H. Tay, "Fabrication of a dielectrophoretic chip with 3D silicon electrodes," *Journal of Micromechanics and Microengineering*, vol. 15 (3), 2005, pp. 494-500.	2.141	2.141
49	C. Iliescu, J. Miao, F.E.H. Tay, "Optimization of PECVD amorphous silicon process for deep wet etching of Pyrex glass," *Surface and Coatings Technology*, vol. 192 (1), 2005, pp. 43-47.	3.192	3.192
50	C. Iliescu, J. Miao, F.E.H. Tay, "Stress control in masking layers for deep wet micromachining of Pyrex glass," *Sensors and Actuators A: Physical*, vol. 117 (2), 2005, pp. 286-292.	2.739	2.739
51	C. Iliescu and J. Miao, "One mask process for silicon accelerometers on Pyrex glass utilizing notching effect in ICP DRIE," *Electronic Letters*, vol. 39 (8), 2003, pp. 658-659.	1.343	1.343
	TOTAL	156.907	156.907

Factorul de impact cumulat al articolelor ca co-autor:

Nr.	Articol	**Factor de impact**	**Nr autori**	**Punctaj**
1	M. Ni S. Zhuo, C. Iliescu, P.T. So, J.S. Mehta, H. Yu, C. Hauser, "Self-assembling amyloid-like peptides as exogenous second harmonic probes for bioimaging applications," *Journal of Biophotonics*, 2019.	3.763	7	0.537
2	D. Resnik, M. Možek, B. Pečar, A. Janež, V. Urbančič, C. Iliescu, and D. Vrtačnik "In vivo experimental study of noninvasive insulin microinjection through hollow Si microneedle array," *Micromachines*, vol 9(1), 2018, art. no: 40.	2.426	7	0.346
3	I. Cima, S.L. Kong, I.B. Tan, W.M. Phyo, D. Lee, M. Hu, D. Sengupta, C. Iliescu, J.H. Vo, W.L. Goh, M. Rahmani, N.A. Mohamed Suhaimi, J.A. Tai, J.H. Tan, C. Chua, R. Ten, I. Alexander, R.M. van Dam, W. Y. Lim, S. Prabhakar, B. Lim, P.K. Koh, P. Robson, J. Y. Ying, A. M. Hillmer & M. H. Tan "Tumor-derived circulating endothelial cell clusters diagnostic for early colorectal cancer", *Science Translational Medicine*, vol. 8, (345), 2016, 345ra89.	17.2	28	0.614
4	L. Alhasan, A. Qi, A. Al-Abboodi, A.R. Rezk, P.P.Y. Chan, C. Iliescu, and L.Y. Yeo "Rapid enhancement of cellular spheroid assembly by acoustically-driven microcentrifugation," *ACS Biomaterials Science & Engineering*, vol. *2*, (6), 2016, pp .1013–1022	4.511	7	0.644

5	H. Kathuria, J.S. Kochhar, M.H.M. Fong, M. Hashimoto, C. Iliescu, H. Yu, L. Kang, "Polymeric microneedle array fabrication by photolithography," *Journal of Visualized Experiments (JoVE),* issue 105, 2015.	1.108	7	0.158
6	J.S. Kochhar, P. Anbalagan, S. B. Shelar, J.K. Neo, C. Iliescu, L. Kang "Direct microneedle array fabrication of a photomask to deliver collagen through skin," *Pharmaceutical Research,* vol. 31 (7), 2014, pp. 1724-1734.	3.986	6	0.664
7	D. Choudhury, D. van Noort, C. Iliescu, B.X. Zheng, K.-L. Poon, S. Korzh, V. Korzh, H. Yu "Fish and Chips: A microfluidic perfusion platform for monitoring the development of early stage zebrafish embryos," *Lab on a Chip* vol. 12 (5), 2012, pp. 892-900.	6.914	7	0.987
8	H. Taylor, D. Boning, and C. Iliescu "A razor-blade test of the demolding energy in a thermoplastic embossing process," *Journal of Micromechanics and Microengineering,* vol. 21 (6) June 2011, art. no. 067002.	2.141	3	0.713
9	D. Choudhury, X. Mo, C. Iliescu, L.L. Tan, W.H. Tong and H. Yu, Exploitation of chemical and physical constraints for 3D microtissue construction in microfluidics," *Biomicrofluidics*, vol. 5 (2), 2011, art. no. 022203.	2.531	6	0.421
10	S. Zhang, W.H. Tong, B. Zheng, T.A.K. Susanto, L. Xia, C. Zhang, A. Ananthanarayanan, X. Tuo, S.R. Binte, R.R. Jia, C. Iliescu, K.H. Chai, M. McMillian, S. Shen, H.L. Leo and H. Yu, "A robust high-throughput sandwich cell-based drug screening platform," *Biomaterials*, vol. 32 (4), 2011, pp. 1229-1241.	10.273	16	0.642
11	F.E.H. Tay, L. Yu, C. Iliescu, "Particle manipulation by miniaturized dielectrophoretic devices," *Defence Science Journal*, vol. 59 (6), 2009, pp. 595-604.	0.589	3	0.196
12	B.T. Chen, J. Wei, F.E.H. Tay, Y.T. Wong and C. Iliescu, "Silicon microneedles array with biodegradable tips for transdermal drug delivery," *Microsystem Technologies,* vol.14 (7), 2008, pp. 1015-1019.	1.513	5	0.302
13	J. Wei, P.L. Ong, F.E.H. Tay and C. Iliescu, "A new fabrication method of low stress PECVD SiN_x layers for biomedical application," *Thin Solid Films,* vol. 516 (16), 2008, pp. 5181-5188.	1.888	4	0.472
14	H. Taylor, D. Boning, C. Iliescu and B.T. Chen, "Computationally efficient modeling of pattern dependencies in the micro-embossing of thermoplastic polymers," *Microelectronic Engineering,* vol. 85 (5-6), 2008, pp. 1453-1456.	1.654	4	0.413
15	M. Avram, A.M. Avram, A. Bragaru, A. Ghiu, C. Iliescu, "Plasma surface modification for selective hydrophobic control," *Romanian Journal of Information Science and Technology (ROMJIST)*, vol. 11 (4), 2008, pp. 409-422.	0.661	5	0.132
16	L. Yu, C. Iliescu, G. Xu and F.E.H. Tay, "Sequential field-flow cell separation method in a dielectrophoretic chip with 3D electrodes," *Journal of Microelectromechanical Systems (JMEMS)*, vol. 16 (5), 2007, pp. 1120-1129.	2.621	4	0.655
17	D.P. Poenar, C. Iliescu, M. Carp, A.J. Pang and K.J. Leck, "Glass-based microfluidic device fabricated by Parylene wafer-to-wafer bonding for impedance spectroscopy," *Sensors and Actuators A*. vol. 139 (1-2), 2007, pp. 162-171.	2.739	5	0.547
18	G. Tresset and C. Iliescu, "Electrical control of loaded biomimetic femtoliter vesicles in microfluidic system," *Applied Physics Letters,* vol. 90 (17), 2007, pp. 173901/1-3.	3.521	2	1.76
19	F.E.H. Tay, L. Yu, A.J. Pang and C. Iliescu, "Electrical and thermal characterization of a dielectrophoretic chip with 3D electrodes for cells manipulation," *Electrochimica Acta,* vol. 52 (8), 2007, pp. 2862-2868.	5.383	4	1.345
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25	L. Yu, F.E.H. Tay, G.L. Xu and C. Iliescu, "Theoretical analysis and experimental research of a novel DEP chip with 3-D silicon electrodes," *International Journal of Software Engineering and Knowledge Engineering (IJSEKE),* vol. 15 (2), 2005, pp. 231-236.	0.644	4	0.161
26	K.L. Tan, P. Padmanbhan, C. Iliescu and F.E.H. Tay, "Modeling and analysis of nanotips for thermoelectric coolers," *International Journal of Software Engineering and Knowledge Engineering (IJSEKE),* vol. 15 (2), 2005, pp. 237-242.	0.644	4	0.161
TOTAL				13.792

CRITERIUL 3: NP-Numărul total de articole în reviste ISI în care candidatul este autor principal

Condiție minimă NP>20
Total număr de articole ca autor principal: 52 (26 articole ca prim autor și autor de corespondență, 5 articole ca prim autor, 21 articole ca autor de corespondență)

A. Prim autor și autor de corespondență:

1. C. Iliescu* and G. Tresset "Microfluidics-driven strategy for size-controlled DNA compaction by slow diffusion through water stream," *Chemistry of Materials,* **vol. 27 (24),** 2015, pp. 8193-8197.
2. C. Iliescu,* G. Xu, W.H. Tong, F. Yu, C.M. Bălan, G. Tresset and H. Yu "Cell patterning using a dielectrophoretic–hydrodynamic trap," *Microfluidics and Nanofluidics,* **vol. 19 (2),** 2015, pp. 363-373.
3. C. Iliescu,* C. Mărculescu, S. Venkataraman, B. Languille, H. Yu and G. Tresset "On-chip controlled surfactant–DNA coil–globule transition by rapid solvent exchange using hydrodynamic flow focusing," *Langmuir*, **vol. 30 (44),** 2014, pp. 13125-13136.
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5. C. Iliescu,* G. Tresset, L. Yu, G. Xu, "3D dielectrophoretic chips : trapping and separation of cell populations," *Romanian Journal of Information Science and Technology (ROMJIST)*, **vol. 13 (1)**, 2010, pp. 49-64.
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CRITERIUL 4: Numarul de citări din baza de date SCOUPUS (excluzând autocitările candidatului)

Condiție NC>120

Număr citări din baza de date SCOPUS excluzând autocitările candidatului -1615 (la data de 05.08.2018)

Nr.	Articol	Citări
1	C. Iliescu,* H. Taylor, M. Avram, J. Miao, S. Franssila, "A practical guide for the fabrication of microfluidic devices using glass and silicon," *Biomicrofluidics*, vol. 6, 2012, art. no. 016505	136

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TOTAL @ 19.01.2020	**1937**

<u>CRITERIUL 5:</u> Numărul de contracte de cercetare-dezvoltare-inovare obținute la nivel național sau internațional ori contracte de cercetare-dezvoltare-inovare cu terți (NCO) în valoare minimă echivalentă de €10.000
(în calitate de director de proiect)

Condiție: NCO≥1
Proiecte obtinute ca director de proiect: 2

1.“Microfluidic Directed Self-Assembly of Viromimetic Nanomachines” (grant bilateral Franta-Singapore-France sub programul Merlion) valoare total €30000 (2010-2011)
2. Fabrica microfluidica pentru auto-asamblarea asistata a nanosistemelor “Microfluidic factory for assisted self-assembly of nanosystem “ – MICRONANOFAB -POSCCE/665/12609/209/20.07.2010, 2010-2015 –Program Operational Sectorial "Cresterea Competitivitatii Economice"-"Investitii pentru viitorul dumneavoastra" (http://www.imt.ro/MICRONANOFAB/informatii_generale.php) in valoare de €1.5 milioane

Declar pe propria raspundere ca informatiile prezentate sunt conforme cu realitatea.

Ciprian Iliescu