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Profesor dr.ing. IONIŢĂ Valentin

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V. BREVETE DE INVENŢIE / INOVAŢII

1. H. Gavrila, Gh. Mihaiescu, S. Nicolaie, V. Ioniţă, M.D. Marin, E. Macamete, W. Kappel - *Double-energized electrical machine consists of a ring wound armature, an annular hollow cylinder-shaped electromagnetic yoke having located on its surface a winding with spiral wires, without notches (Masina electrica dublu excitata)*, OSIM, brevet nr. RO-125881-B1 / 29.07.2011, DIIDW:2010Q11827
2. D.I. Manea, L. Petrescu, E. Cazacu, M.C. Petrescu, V. Ioniţă, O. Ghita, A.I. Chirila, D. Deaconu (8 autori), *Sistem inteligent de evaluare, prelucrare și analiză a curenților de conectare a echipamentelor electrice (Intelligent system of evaluation, processing and analysis of electric equipment connecting currents)*, OSIM, brevet nr. RO-134278-A2 / 30.06.2020
3. G. Stamatescu, E. Cazacu, L. Petrescu, V. Ioniţă, A.I. Chirila, M.C. Petrescu, D. Deaconu, *Sistem inteligent de monitorizare continuă și denominare a parametrilor transformatoarelor de distribuție în regim nesinusoidal (Smart system of continuous monitoring and denomination of distribution transformer parameters in non-sinusoidal conditions),* OSIM, brevet nr. RO-134145-A2 / 29.05.2020

4. A. Bosneaga, E. Cazacu, L. Petrescu, V. Ioniţă, A.I. Chirila, M.C. Petrescu, D. Deaconu, *Sistem inteligent de mentenanță predictivă a unor echipamente electrice industriale critice (Smart system for predictive maintenance of critical industrial electrical equipments)*, OSIM, brevet nr. RO-134140-A2 / 29.05.2020

VI. CONTRACTE SI RAPOARTE STIINTIFICE

Pi. Proiecte internaţionale de cercetare-dezvoltare – inovare obtinute prin competitie, pe bază de contract/grant, elaborate in calitate de coautor

1. D.Ioan, V.Ioniţă si altii - *Nature-inspired micro-fluidic manipulation using artificial cilia*, contract FP6, coord. Philips Electronics (Eindhoven–Olanda), no. NMP4-CT-2006-033274, 2006-2010
2. H.Gavrila, V.Ioniţă si altii – *Nanostructured and amorphous magnetic alloys for high-frequency applications*, Executive Prog. of Scientific and Technological Cooperation between Italy and Romania, contract nr.4, 2005-2007
3. H.Gavrila, V.Ioniţă si altii – *MAGNAT- Cercetari fundamentale in domeniul modelarii fizice si matematice, al calculului si realizarii unor dispozitive magnetice*, grant major de cercetare CNCSIS 3/2C, contract nr. 39731/1998 (MEN) sau 9265/1998 (UPB), 1999-2001;
4. H.Gavrila, V.Ioniţă si altii – *PU-MAGNAT- Program de pregatire postuniversitara - studii aprofundate si doctorat, in domeniul magnetismului aplicat si tehnic*, grant CNCSIS 76/4D, contract 40625, 2000-2001.

Pn. Proiecte naţionale de cercetare-dezvoltare – inovare obtinute prin competitie, pe bază de contract/grant, elaborate in calitate de director

1. *Efectele campurilor magnetice tranzitorii ultra-intense, generate de laserii de mare putere, asupra celulelor canceroase leucemice si limfomatoase / HiPoCell*, contract PN-IV-5.9/5.9.1 ELI-RO nr. 30/2024, 2024-2027 (responsabil partener, valoare Politehnica Bucureşti 501.155 lei, 33 luni)
2. *Predeterminarea pierderilor de energie pentru proiectarea îmbunatăţită a miezurilor nanocompozite magnetice moi în aplicaţii având game extinse de frecvenţe*, contract PN-III-P2-2.1-PED-2016-0451, 2017-2018 (director proiect, valoare 600.000 lei, 1.5 ani)
3. *Modelări şi simulări privind comportarea în regim dinamic a materialelor magnetice cu proprietăţi controlate*, grant CNCSIS tip A-Consortiu, contract 6GR/2006, 2006-2008 (coordonare colectiv UPB - partener);
4. *Dezvoltarea unor modele experimentale si numerice de caracterizare a materialelor magnetice cu histerezis*, contract CEEX 78/2006, 2006-2008 (coordonare colectiv UPB - partener);
5. *Materiale magnetice cu performanţe superioare utilizate în construcţia maşinilor electrice*, contract CEEX 215/2006, 2006-2008 (coordonare colectiv UPB - partener);

6. *Studiul prin microscopie magneto-optica a proceselor de micro- si nano-magnetizare din materialele magnetice*, grant CNCSIS, A-362, 2005-2007;
7. *Metoda experimentala pentru studiul materialelor cu proprietati magnetice prin efect magneto-optic Kerr*, contract CEEX 33/2005, 2005-2008 (coordonare colectiv UPB - partener);
8. *Analiza configuratiilor statice si dinamice de magnetizatie in materialele magnetice prin efect magneto-optic Kerr*, contract PNCDI – proiect CERES nr. 4-135/2004, 2004-2006;
9. *Instalatie de conversie energetica neconventionala de mica putere, bazata pe integrarea unor materiale avansate si solutii tehnologice noi*, contract PNCDI – RELANSIN nr. 1804/2003, 2003-2005 (coordonare colectiv UPB - partener);
10. *Caracterizarea vectoriala a materialelor magnetice in calculul de inalta performanta al campului electromagnetic*, grant CNCSIS, A-480, 2002-2004;
11. *Metode avansate de caracterizare a materialelor magnetice cu histerezis*, grant CNCSIS (Consiliul National al Cercetarii Stiintifice din Invatamantul Superior), contracte 37124/2000 (AT-201) si 34967/2001 (AT-10), 2000-2001;
12. *Biblioteca informatica de materiale magnetice cu histerezis pentru calculul de inalta performanta a dispozitivelor electromagnetice*, grant ANSTI/MEC, contract nr.6111/2000, tema B-38 / A-36, 2000-2001;

Pn. Proiecte naţionale de cercetare-dezvoltare – inovare obtinute prin competitie, pe bază de contract/grant, elaborate in calitate de coautor

1. F. Ciuprina, V. Ioniţă si altii - *Nanodielectrici pentru substraturi de antene microstrip pentru mediul subacvatic* – NaDUMAS, 398PED/2020 / PN-III-P2-2.1-PED-2019-4687, 2020-2022
2. L. Petrescu, V. Ioniţă si altii - *Sistem inovativ de protecţie anticorozivă activă a metalelor alimentat de la surse regenerabile de energie – SIPAMASRE*, coordonator: ICPE ACTEL, Cod SMIS: 121611 / 273/24.06.2020, 2020-2023
3. E. Cazacu, V. Ioniţă si altii – *Sistem inteligent de monitorizare continuă şi denominare a parametrilor transformatoarelor de distribuţie în regim nesinusoidal*, contract nr. 187CI / 2018, PN-III-P2-2.1-CI-2018-1098 (Cecuri de inovare, beneficiar: Asti Automation SRL, 50000 Ron), iul-dec 2018, nr. intern ET-02-18-02
4. L. Petrescu, V. Ioniţă si altii – *Sistem inteligent de evaluare, prelucrare şi analiză a curenţilor de conectare a echipamentelor electrice*, contract nr. 203 CI / 2018, PN-III-P2-2.1-CI-2018-1217 (Cecuri de inovare, beneficiar: Lightning Net SRL), iul-dec 2018, nr. intern ET-02-18-03
5. E. Cazacu, V. Ioniţă si altii – *Sistem inteligent de mentenanţă predictivă a unor echipamente electrice industriale critice*, contract nr. 204 CI / 2018, PN-III-P2-2.1-CI-2018-1220 (Cecuri de inovare, beneficiar: Bosadi Electric SRL), iul-dec 2018, nr. intern ET-02-18-04
6. H.Gavrila, V.Ioniţă si altii - *Maşini electrice cu eficienţă sporită, prin utilizarea unor soluţii tehnice avansate, bazate pe predeterminarea proprietăţilor magnetice ale tolelor*, contract CNDI-UEFISCDI PCCA Tip 2 nr. 32/2012, 2012-2016
7. H.Gavrila, V.Ioniţă si altii - *Sistem micro-electro-mecanic cu aplicaţii în reconstrucţia microchirurgicală a nervilor periferici (RECONECT*), contract PC 72-160/1.10.2008, 2008-2011, coordonator: INCD pentru Microtehnologie.

8. H.Gavrila, V.Ioniţă si altii - *Biochip microfluidic pentru caracterizarea reologică a fluidelor biologice ne-newtoniene cu aplicaţii în diagnoză şi tratament medical (MELANOCHIP*), contract PC 12-094/1.10.2008, 2008-2011, coordonator: INCD pentru Microtehnologie
9. H.Gavrila, V.Ioniţă si altii – *Sistem microfluidic integrat pentru analiza în vitro a fluidelor biologice cu aplicaţii în diagnoză şi tratament medical*, contract CEEX 27/2005, 2005–2008
10. H.Gavrila, V.Ioniţă si altii - *Aprofundarea cunoştinţelor de spintronică prin dezvoltarea fizicii compuşilor Heusler ajustabili*, contract CEEX 69/2005, 2005–2008
11. H.Gavrila, V.Ioniţă si altii - *Cercetări fundamentale şi aplicative în domeniul materialelor multi-funcţionale nanostructurate*, grant CNCSIS tip A-Consorţiu, tema 1, cod CNCSIS 97, 2005-2007
12. H.Gavrila, V.Ioniţă, F.Hantila si altii – *Sistem de servicii pentru documentare, informare si transfer al informatiilor tehnice, economice, juridice, armonizate UE, in sectorul industrial*, contract PNCDI – proiect RELANSIN nr.1053/2004, 2004-2006;
13. H.Gavrila, V.Ioniţă, F.Hantila si altii – *Mijloace de protectie complexa la interferenta electromagnetica, pe nave militare*, contract PNCDI – proiect CERES nr.4-134/2004, 2004-2006;
14. H.Gavrila, V.Ioniţă, F.Hantila si altii – *Reducerea amprentei magnetice a navei militare in scopul protectiei impotriva campurilor de mine marine*, contract PNCDI – proiect CERES nr.3-101/2003, 2003-2005;
15. H.Gavrila, V.Ioniţă si altii – *Soluţii de creştere a densităţii de înregistrare în sistemele de disc magnetic dur pentru înregistrarea magnetică a informaţiei,* grant CNCSIS, A-15, 2003-2005;
16. H.Gavrila, V.Ioniţă, F.Hantila si altii – *Solutii noi de optimizare a ecranelor de protectie pentru radiatii electromagnetice neionizante in gama extinsa de frecventa 500 kHz-10 GHz*, contract PNCDI – proiect CERES nr. 64/2002, 2002-2004;
17. H.Gavrila, V.Ioniţă si altii – *Contributii la studiul mediilor particulate de inregistrare magnetica a informatiei,* grant ANSTI/CNCSIS, contract 6111/2000 (B-11), act ad.I/2001 (A-8) si 33784/2002 (A-184), 2000-2002;
18. H.Gavrila, V.Ioniţă si altii – *Metode avansate de calcul numeric al campului magnetic in medii neliniare si cu histerezis*, grant CNCSU, A-764, 1998-1999;
19. H.Gavrila, V.Ioniţă si altii - *Studiul unor metode de prevenire a posibilitatilor de inregistrare eronata, voita sau accidentala, a cartelelor magnetice de acces la metrou*, contract MCT nr. 836/1996 (B-71), act aditional 712/III/1997 (A-117) si act aditional 631/I/1998 (A-119), 1996-1998;
20. H.Gavrila, V.Ioniţă si altii - *Studii de fundamentare teoretica a proceselor de magnetizare in mediile de inregistrare magnetica a informatiei*, grant CNCSU (Consiliul National al Cercetarii Stiintifice Universitare), contracte 4001/1995 (B-75), 5001/1996 (B-277), 1995-1996;
21. H.Gavrila, V.Ioniţă si altii - *Studiul teoretic si realizarea practica a unor dispozitive de determinare a caracteristicilor magnetice ale materialelor, cu integrarea unor metode si tehnici moderne de proiectare*, contract MCT (Min. Cercetarii si Tehnologiei) nr. 510-B/1995 (B-30), 836/1996 (A-45) si 836/1997 (A-53) 1995-1997;