



## Universitatea Babeș-Bolyai Competiția Excelenței 2010

**Notă: Toate datele se referă la perioada 2005-2009**

<b>Nume, prenume, grad did.</b>	POP AUREL
<b>Facultatea, Catedra</b>	Facultatea de Fizica, Catedra de Fizica Stării Condensate
<b>Domeniul științific</b>	Fizica
<b>Adresa paginii web personale</b>	<a href="http://www.phys.ubbcluj.ro/">www.phys.ubbcluj.ro/</a>
<b>Adresa e-mail</b>	Aurel.pop@phys.ubbcluj.ro

### **Criteriul I – Output (60%)**

**total punctaj: 1145,56 + 44,98 + 9 = 1199,54**

- Articole științifice publicate în reviste indexate ISI (cu menționare factorului de impact în cazul celor cotate):

20 articole	1145,56 pct
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- In cazul în care nu are Factor de impact ISI :

5 articole	44,98pct
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- Articole științifice publicate în reviste indexate în BDI (din lista CNCSIS) și în reviste românești recunoscute de CNCSIS tip B și B<sup>+</sup> :

3 articole	9 pct
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### **Criteriul II – Prestigiu profesional 30%**

**total punctaj: 10 + 440 + 10 + 15 + 27+12+42+20+8+5+175,05 +126,54+25+20= 935,59 pct**

- Citări ale articolelor ISI listate la Criteriul I

1 citari	10 pct
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- Alte citări ale lucrărilor listate mai sus

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- Citări în perioada 05-09 ale articolelor anterioare anului 2005

44 citari	440 pct
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- Distincții, premii și alte recunoașteri naționale și internaționale:

	:10p
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Premiul “Stefan Procopiu” acordat de Academia Romana in anul 2007
- Studenti naționali atrași total: 109 pct
- Îndrumare lucrări de licență (număr lucrări susținute)

9 lucrari licenta	27 pct
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- Îndrumare lucrări de disertație (număr lucrări susținute)

4 lucrare dizertatie	12 pct
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- Doctoranzi

7+2	42+20pct
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- Postdoctoranzi

2	8pct
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- Membru în comitetul de redacție la reviste BDI

Studia-Physica	5pct
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- Participări la programe/granturi finanțate din sursă națională (se menționează și valoarea)

membru în 6 contracte nationale	175,05 pct
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- Coordonari la programe/granturi finanțate din sursă națională (se menționează și valoarea)

membru în 6 contracte nationale	2*62,37 =126,54 pct
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- Membru în comisii profesionale relevante, cu titlu oficial

	25pct.
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- Conferințe invitate internaționale

	20 pct.
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### **III. Realizare remarcabilă 10% (aplicat la total punctaj Criteriul III)**

(Descrieți într-o manieră cât mai accesibilă (în maximum 1 pagină) cea mai importantă realizare științifică/tehnică/artistică din ultimii 5 ani și impactul acesteia.)

Cea mai importanta realizare stiintifica din ultimii 5 ani este concentrata in studiul proprietatilor fizice ale unor materiale noi, cu aplicatii supraconductoare, iar din anul 2007 initierea de cercetari interdisciplinare asupra straturilor cu aplicatii tribologice si anticorozive.

Tematica acestei cercetari interdisciplinare a avut impact asupra partenerilor din industrie ( firma Betak din Bistrita) si din cercetarea aplicativa ( Universitatea Tehnica din Cluj-Napoca si INCDTIM Cluj-Napoca), care au participat alaturi de noi, in competitii castigate la accesarea granturilor PN2 si Inovare.

Principala realizare stiintifico-tehnica se refera la sinteza si caracterizarea proprietatilor materialelor supraconductoare, a straturilor nanostructurate din nitruri si a straturilor compozite de Zn cu nanoparticule de  $TiO_2$ , respectiv la dezvoltari tehnologice de sinteza si caracterizarea materialelor in vederea folosirii acestora la aplicatii practice.

Principalele realizari sunt urmatoarele :

(1) imbunatatirea proprietatilor intergranulare ale ceramicilor cu aplicatii supraconductoare prin modificarea unor parametri tehnologici de sinteza;

(2) elaborarea metodei de control fin a tranzitiei izolator-supraconductor in filmele subtiri HTS cu nanodefekte introduse prin modificarea compozitiei gazului de sputtering si prin tratamente termice in vid

(3) modificarea metodei de control a microstructurii si proprietatilor mecanice si tribologice a straturilor de nitruri in cadrul tehnologiei de pulverizare catodica in sistem magnetron, modificand independent energia ionilor si densitatea fluxului de ioni cu un camp magnetic suplimentar.

(4) identificarea mecanismelor prin care nanoparticulele favorizeaza protectia anticoroziva, in urma caracterizarii prin metode fizice a unor straturi compozite anticorozive cu nanoparticule.

Beneficiarii rezultatelor acestei cercetari sunt :

-Firme producatoare de scule sau piese solicitate la uzare inclusiv din industria auto si transport de energie

- Firme ce realizeaza acoperiri metalice cu proprietati anticorozive

-Institute de cercetare dezvoltare (CD)

-laboratoare si centre de cercetare din universitati

Realizarea stiintifica are 2 componente:obtinerea de rezultate privind cercetarea fundamentala a proprietatilor materialelor si cercetarea aplicativa si tehnologica.

Principalele rezultate originale privind materialele supraconductoare, rezultate care au fost publicate in cele 20 de articole reviste ISI, 5 articole stiintifice publicate in ISI proceedings si 3 articole in reviste din BDI sunt:

- punerea in evidenta in filmele subtiri de Bi:2201 a dependentei rezistivitatii electrice de  $\ln T$  incepand de la 34K pana la 4,2K, pe un interval mai larg de temperaturi decat in raportarile anterioare din literatura (care evidentiau aceasta comportare pentru  $T \leq 20K$ );
- punerea in evidenta a tranzitiei de la faza nedistorsionata (I4/mmm) la faza distorsionata (Acam) in compusul supraconductor de tip  $n, (Nd_{1-y}Gd_y)_{1,85} Ce_{0,15} CuO_4$ , in functie de: concentratia de Gd, temperatura si presiune;
- Tranzitia metal –izolator evidentiata in compusii subdopati de tipul Bi:2201 si Y:123 si efectul ciclului termic asupra modificarii distributiei oxigenului in jurul clusterilor de Fe din lanturile compusului Y:123;
- Evidentierea rolului de centri de pinning intergranulari a elementelor 4f ce substituie partial Ca in compusul Bi:2223.
- Explicarea rolului nanoparticulelor de  $TiO_2$  in imbunatatirea proprietatilor straturilor compozite anticorozive.

Impactul acestor rezultate se regaseste in acordarea premiului Academiei Romane in anul 2007.

Impreuna cu doctoranzii si masteranzii,am construit si testat o instalatie pentru masuratori pana la temperaturi de 10K fara folosirea lichidelor criogenice. Aceasta instalatie folosita deocamdata pentru experimente de rezistenta electrica in functie de temperatura la compusi bulk si filme subtiri, este interfatata cu un calculator de proces..

Am crescut functionalitatea instalatiei pentru depunerea de straturi subtiri prin reconfigurarea sistemului initial, adaugand 2 magnetronuri si monitorizand cu doua debitmetre masice presiunea gazului de sputtering.In acest mod am obtinut straturi subtiri cu proprietati superioare.

imbunatatirea parametrilor celulelor de presiune existente.

**Total punctaj criteriul I si II:  $0,6 \times 1199,54 + 0,3 \times 935,59 = 719,72 + 280,67 = 1000,4\text{pct}$**

Data:

17.03.2010

Certific validitatea datelor prezentate

Sef de catedra,

Semnatura:

Prof. Aurel Pop  
Catedra de Fizica Starii Condensate

**Criteriul I – Output      60% (aplicat la total punctaj Criteriul I – Output)**

**TOTAL Criteriul I=1199,54**

**1. Articole științifice publicate în reviste indexate ISI (cu menționare factorului de impact în cazul celor cotate) **Total:1145.56****

Se acorda 30 puncte pentru fiecare articol si se tine cont de numărul de autori.

Formula de calcul:  $(30 / \text{număr de autori}) \times \text{Factor de impact ISI} \times 10$

1. Pop, A.V, Ilonca,G., Pop.M.,Marconi, D.

Effect of oxygen concentration in sputtering gas and effect of substrate type on the electrical resistance of Bi:2201 nanoscale thin films

J.Alloys and Compounds 389,5-9(2005) 1,37/4=0,342

$$(30/4) * 1,37 * 10 = 102,75$$

2.Pop, A.V, Pelshenke C, Cozar O.

Structural Instability and superconductivity of the (Nd,Gd,Ce)<sub>2</sub>CuO<sub>4</sub> system

Modern Physics Letters B19,nr.12,607-612 (2005) 0.621/3=0,207

$$(30/3) * 0.621 * 10 = 62.1$$

3.. Pelshenke C, Pop, A.V., Cozar O

Structural phase diagram for the thermal controlled distortion by Gd ions in the (Nd<sub>1-y</sub>Gd<sub>y</sub>)<sub>1.85</sub>Ce<sub>0.15</sub> CuO<sub>4</sub> HTS system

Int.J.Modern Physics B 19,nr.13,2161-2166 (2005). 0,581/3

$$(30/3) * 0.581 * 10 = 58,1$$

4. T.R.Yang, G.Ilonca, A.V.Pop, V.Toma, I.Matei and F.Beiusan

“ Magneto-resistivity and magnetic properties on MgB<sub>2</sub> thin films”

Int.J.Mod.Phys.B19,vol.24, 3273-3230 (2005). 0.581/6

$$(30/6) * 0.581 * 10 = 29,05$$

5. T.R.Yang, G.Ilonca, F.Beiusan, A.V.Pop, V.Toma, I.Matei and S.Patapis

“Synthesis of Ru<sub>1-x</sub>Sb<sub>x</sub>Sr<sub>2</sub>(Eu<sub>0.7</sub>Ce<sub>0.3</sub>)<sub>2</sub>Cu<sub>2</sub>O<sub>10-d</sub> and their magnetic and transport properties”

Int.J.Mod.Phys.B19,vol.22, 3511 (2005). 0.581/7

$$(30/7) * 0.581 * 10 = 24,9$$

6)A.V.Pop, G.Ilonca, M.Pop

"Metal insulator transition induced by oxygen in nanoscale Bi:2201 thin films and in bulk Y:123 superconducting materials"

J.Optoelectronics and Advanced Materials 8, no.2,400-483(2006).

$$1.106/3=0.368$$

$$(30/3) * 1.106 * 10 = 110.6$$

7) A.V.Pop, D.Marconi, V.Pop, M.Pop

„Intergranular dissipation processes induced by nanodefects in (Bi,Pb):2223 HTS superconductor”

J.Optoelectronics and Advanced Materials 8, no.2, 476-479(2006). 1.106/4=0.276

$$(30/4)* 1.106*10= 82.95$$

8) C.Pelshenke, O.Cozar, A.Pop,

„Structural instability under pressure in the HTS (Nd,Gd,Ce)<sub>2</sub>CuO<sub>4</sub>” ,

J.Optoelectronics and Advanced Materials 8, no.3, 1283-1286(2006). 1.106/3=0.36

$$(30/3)* 1.106*10= 110.6$$

9) A.V.Pop,G.Ilonca,V.Pop, E.Dorolti, D.Marconi,

„Suprconductor- insulator transition induced by nanodefects in Y:123 bulk HTS” ,

J.Optoelectronics and Advanced Materials 9, no.3, 551-553(2007). 0.827/5=0.165

$$(30/5)* 0.827*10= 49.62$$

10) A.V.Pop,G.Ilonca,D.Radulescu, M.Pop

„Nanoparticulate precipitates in Y:123 thin films” ,

J.Optoelectronics and Advanced Materials 9, no.3, 554-556(2007). 0.827/4=0.206

$$(30/4)* 0.827*10= 62.02$$

11) A.V.Pop,G.Ilonca, M.Pop and D.Marconi

“The metal-insulator transition induced in Bi<sub>2</sub>Sr<sub>1.93</sub> Cu<sub>1.01</sub> O<sub>6+d</sub> thin films by oxygen concentration in sputtering gas”

Physica C 460-462, 817-818 (2007)

1.079/4=0.269

$$(30/4)* 1.079*10= 80.92$$

12).G.Ilonca,T.R.Yang, A.V.Pop, V.Toma,P.Balint, M.Bodea, D.Marconi and T.Jurcut

“Superconductivity of MgB<sub>2</sub> sputtered thin films with aluminium nitride buffer layers”

Physica C 460-462, 557-559 (2007).

1.079/8=0.134

$$(30/8)* 1.079*10= 40.46$$

13) G.Ilonca, V.Toma, T.R.Yang, A.V.Pop, P.Balint, M.Bodea and E.Macocean

“Magnetic field and temperature dependence of thermal activated dissipation in epitaxial thin films of Bi<sub>2</sub>Sr<sub>2</sub>Ca(Cu<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub>O<sub>d</sub> superconductors

Physica C 460-462 , 369-371(2007)

1.079/7=0.154

$$(30/7)* 1.079*10= 46.24$$

14. A.V.POP<sup>1)</sup>, D.MARCONI<sup>1)</sup>, Roxana COLDEA<sup>1)</sup>, V.POP<sup>2)</sup>

“AC susceptibility study of the intergranular flux motion in the Fe doped (Bi,Pb)<sub>2</sub>Sr<sub>2</sub>Ca<sub>2</sub> Cu<sub>3</sub>O<sub>y</sub> high temperature superconductor”

J.Optoelectronics and Advanced Materials 10 ,no.4 (2008) 916-918.

0.577/4=0.144

$$(30/4)* 0.577*10= 43.27$$

15. A.V. POP<sup>1</sup>, S. MANOLACHE<sup>1</sup>, R. COLDEA<sup>1</sup> AND M. POP<sup>2</sup>

“Structural properties and epitaxial growth mechanisms of nanoscale Bi<sub>2</sub>Sr<sub>2</sub>CaCu<sub>2</sub>O<sub>y</sub> thin films”

J.Optoelectronics and Advanced Materials 10 ,no.4 (2008)919-921.

0.577/4=0.144

$$(30/4)* 0.577*10= 43.27$$

16. D. MARCONI<sup>a</sup>, I. MATEI<sup>a</sup>, C. LUNG<sup>a</sup>, A.V. POP<sup>a</sup>

„Study of localization processes in transport properties of Bi:2201 epitaxial thin film”

J.Optoelectronics and Advanced Materials 10,(2008)926-928.

0.577/4=0.144

$$(30/4)* 0.577*10= 43.27$$

17. A.V.Pop<sup>1</sup>, C.Lung<sup>1</sup>, D.Radulescu<sup>2</sup>, V.Pop<sup>3</sup>  
„Hysteresis curves of the flux motion in YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-δ</sub> thin films with nanoscale pinning centers”  
J.Optoelectronics and Advanced Materials10 ,no7,(2008)1869-1871. 0.577/4=0.144  
**(30/4)\* 0.577\*10= 43.27**

18. A.V.Pop<sup>1</sup>,D.Marconi<sup>1</sup>,M.Topan<sup>1</sup>, M.Pop<sup>2</sup>  
„Irreversibility processes from AC magnetic susceptibilities in (Bi,Pb):2223 HTS system doped  
by 3d elements”  
J.Optoelectronics and Advanced Materials10 ,no7(2008)1866-1868. 0.577/4=0.144  
**(30/4)\* 0.577\*10= 43.27**

19.A.V.Pop, I.Matei and M.Pop  
„Effect of partial substitution of Ca by La on intergranular processes in (Bi,Pb):2223  
superconductors”  
J.Optoelectronics and Advanced Materials 10, no.9(2008) p.2451-245 0.577/3=0.192  
**(30/3)\* 0.577\*10= 57.7**

20. A.V.Pop, A.Vlasa,S.Varvara, B.David, C.Bulea, L.Muresan  
“Structural and electrochemical characterization of Zn-TiO<sub>2</sub> nanocomposite coatings  
electrodeposited on steel”  
Optoelectronics and Advanced Materials- Rapid communications 3,no.12,1290-1294 (2009)  
0.224/6=0.037

$$(30/6)* 0.224*10= 11.2$$

## 2. Articole științifice publicate în ISI proceedings

**Total 44,98pct**

Se acorda 30 puncte pentru fiecare articol si se tine cont de numărul de autori.  
Formula de calcul:  $(30 / \text{număr de autori}) \times \text{Factor de impact ISI} \times 10$

### In cazul in care nu are Factor de impact ISI

Se acorda 20 puncte pentru fiecare articol si se tine cont de numărul de autori.  
Formula de calcul:  $20 / \text{număr de autori}$

1. A.V. Pop, D. Marconi, M. Pop

« The influence of partial substitution of Ca by Sm on dissipation processes in  
(Bi<sub>1.6</sub>Pb<sub>0.4</sub>)(Sr<sub>1.8</sub>Ba<sub>0.2</sub>)(Ca<sub>1-x</sub>Sm<sub>x</sub>)<sub>2</sub>Cu<sub>3</sub>O<sub>y</sub> superconductor”.  
JOURNAL OF PHYSICS-Conference series (LT 25 Amsterdam), vol.150, p. 52213,  
(2009), ISSN 1742-6588 (Print), ISSN 1742-6596 (Online)

$$20/3=6.66$$

2. A.V.Pop, I.Matei, V.Pop

“The influence of oxygen deficiency and the unbalance Bi/Sr in Bi<sub>2</sub>Sr<sub>2</sub>CuO<sub>6+d</sub> on  
metal-insulator transition”.  
JOURNAL OF PHYSICS- Conference series (LT 25 Amsterdam), vol.150, p. 52214,  
(2009). ISSN 1742-6588 (Print), ISSN 1742-6596 (Online)

$$20/3=6.66$$

3.D.Marconi<sup>1</sup>, G.Stiufiuc<sup>1</sup>)and A.V.Pop<sup>1</sup>

„Effect of partial substitution of Ca by 4f elements on dissipative processes in Bi:2223  
superconductors”

Journal of Physics –Conference series (International Conference On Superconductivity and Magnetism (ICSM2008)) **153** (2009) 012022, ISSN 1742-6588 (Print), ISSN 1742-6596 (Online)  
**20/3=6.66**

4..A.V.Pop<sup>1\*</sup>,S.Manolache<sup>1)</sup>, I.Matei<sup>1)</sup> and V.Pop<sup>2</sup>  
Low-field AC susceptibility study of the flux motion in Bi<sub>2</sub>Sr<sub>2</sub>CaCu<sub>2</sub>O<sub>y</sub> thin films  
Journal of Physics –Conference series (International Conference On Superconductivity and Magnetism (ICSM2008) ) **153** (2009) 012025, ISSN 1742-6588 (Print), ISSN 1742-6596 (Online)  
**20/4=5**

5. A.V.Pop

Metal-Insulator transition in Bi<sub>2</sub>Sr<sub>2</sub>Cu<sub>1</sub>O<sub>6+d</sub> (Bi-2201) thin films.

Int.Conference TIM 08, American Institute of Physics, Melville, New York, p. 106-111,  
(2009)., ISBN 978-0-7354-0668-1, ISSN 0094-243X

**20/1=20**

### **3. Articole științifice publicate în reviste indexate în BDI (din lista CNCISIS) și în reviste românești recunoscute de CNCISIS tip B și B<sup>+</sup>**

**Total 9 pct.**

Se acorda 10 puncte pentru fiecare articol si se tine cont de numărul de autori.

Formula de calcul:  $10 / \text{număr de autori}$

1).S.MANOLACHE, A.V.POP The Influence of Deposition Parameters on Structural and Electrical Resistance of Epitaxial Bi:2212 Thin Films

Studia UBB Cluj, seria Physica XL,2,49-56 (2006)

**10/2=5**

2) A.V.Pop, C.Lung, G.Stiuftuc, R.Coldea, M. Pop

“Influence of the sintering temperature on structure, electric and mechanical properties of the polycrystalline (Bi,Pb):2223 superconductors”.

STUDIA UNIVERSITATIS BABES BOLYAI. PHYSICA, Vol.1, p.71, 2009.

**10/5=2**

3). A.V.Pop, C.Bulea, B.David, L.Muresan, D.Ciomos

“Effect of TiO<sub>2</sub> nanoparticles on structure and morphology of Zn anticorrosive coatings”.

STUDIA UNIVERSITATIS BABES BOLYAI. PHYSICA, vol.2, p.81, 2009

**10/5=2**

**Total 9**

Semnatura

Prof.dr. Aurel Pop  
Catedra de Fizica Starii Condensate

**Criteriul II – Prestigiu profesional 30% (aplicat la total punctaj Criteriul II)**

**TOTAL Criteriul II= 935,59**

**1. Citări ale articolelor ISI listate la Criteriul I**

**Total: 10**

Formula de calcul: număr citari x 10

[Superconductivity of MgB2 sputtered thin films with aluminium nitride buffer layers](#)

Author(s): Ilonca, G; Yang, TR; Pop, AV, et al.

Conference Information: 8th International Conference on Materials and Mechanisms of Superconductivity and High Temperature Superconductors, Date: JUL 09-14, 2006 Dresden GERMANY

Source: PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS Volume: 460 Pages: 557-559 Published: 2007

Times Cited: 1

1. [First critical field measurements of superconducting films by third harmonic analysis](#)

Author(s): Lamura G, Aurino M, Andreone A, et al. Source: JOURNAL OF APPLIED

PHYSICS Volume: 106 Issue: 5 Article Number: 053903 Published: SEP 1 2009

Times Cited: 0

$(1*10)* =10$

- pentru articolele din reviste cu FI ISI < 1, se aplica formula de la punctul 2.

**3. Citări în perioada 2005-2009 ale articolelor anterioare anului 2005:**

**Total 44 citari\*10=440**

Formula de calcul: număr citari x 10

**1. [Hall effect, thermopower and electrical resistivity of doped RuSr2GdCu2O8 system](#)**

Author(s): Ilonca, G; Beiusan, F; Pop, AV, et al.

Source: INTERNATIONAL JOURNAL OF MODERN PHYSICS B Volume: 18 Issue: 22 Pages: 3057-3062 Published: 2004 FI=0.383

Times Cited: 2

1. Title: [Important Role of the Hall Effect Measurement System in a Modified Course of Materials in Electrical Engineering](#)

Author(s): Stojanovic G, Savic S, Zivanov L Source: IEEE TRANSACTIONS ON EDUCATION Volume: 52 Issue: 3 Pages: 297-304 Published: AUG 2009

Times Cited: 0

□ 2. Title: [Electrical and transport properties of nickel manganite obtained by Hall effect measurements](#)

Author(s): Savic SM, Stojanovic GM, Nikolic MV, et al. Source: JOURNAL OF MATERIALS SCIENCE-MATERIALS IN ELECTRONICS Volume: 20 Issue: 3 Pages: 242-

247 Published: MAR 2009

Times Cited: 0

$(10*2)=20$

**2. The influence of atomic substitutions and sintering temperature on electrical resistance and irreversibility line of (Bi,Pb): 2223 bulk superconductors**

**Author(s): Pop, AV; Ilonca, G; Pop, M, et al.**

**Source: INTERNATIONAL JOURNAL OF MODERN PHYSICS B Volume: 18 Issue: 15 Pages: 2169-2176 Published: JUN 20 2004 FI=0.383**

**Times Cited: 1**

1. Title: [The Effect of Sintering Temperature in Bi<sub>1.7</sub>Pb<sub>0.2</sub>Sb<sub>0.1</sub>Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O \(y\) Superconductors](#)

Author(s): Kocabas K, Bilgili O, Yasar N  
Source: JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM Volume: 22 Issue: 7 Pages: 643-650 Published: OCT 2009  
Times Cited: 0

**(10\*1)=10**

**3. Critical currents of Bi : 2212 doped by Fe and Ni**

**Author(s): Ilonca, G; Yang, TR; Pop, AV, et al.**

**Conference Information: 23rd International Conference on Low Temperature Physics (LT23), Date: AUG 20-27, 2002 HIROSHIMA JAPAN**

**Source: PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS Volume: 388 Pages: 425-426 Published: 2003 ; FI=1,192**

**Times Cited: 5**

1. Title: [Effect of co-doping by Pb and La on structural and magnetic properties of Bi<sub>2</sub>212 superconducting ceramics](#)

Author(s): Kaki AA, Benmaamar F, Mosbah MF, et al.

Conference Information: 11th International Symposium on Physics of Materials (ISPMA), AUG 24-28, 2008 Charles Univ, Fac Math & Phys, Prague, CZECH REPUBLIC  
Source: INTERNATIONAL JOURNAL OF MATERIALS RESEARCH Volume: 100 Issue: 9 Pages: 1226-1229 Published: SEP 2009  
Times Cited: 0

2. Title: [Artificial Pinning Center Studies in Bi<sub>2</sub>212 Tapes and Bulks With Zirconium Oxide Inclusion](#)

Author(s): Cursino E, Schmoor DS, Garitaonandia JS, et al.  
Source: IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY Volume: 19 Issue: 3 Pages: 3516-3519 Part: Part 3 Published: JUN 2009  
Times Cited: 0

3. Title: [Effect of Sm-substitution on the electrical and magnetic properties of \(Tl<sub>0.8</sub>Hg<sub>0.2</sub>\)-1223](#)

Author(s): Abou-Aly AI, Awad R, Ibrahim IH, et al.  
Source: JOURNAL OF ALLOYS AND COMPOUNDS Volume: 481 Issue: 1-2 Pages: 462-469 Published: JUL 29 2009  
Times Cited: 0

4. Title: [Flux pinning properties of rare earth modified \(Bi, Pb\)-2212 superconductors](#)

Author(s): Biju A, Kumar RGA, Aloysius RP, et al.  
Source: SUPERCONDUCTOR SCIENCE & TECHNOLOGY Volume: 19 Issue: 8 Pages: 854-859 Published: AUG 2006  
Times Cited: 5

5. Title: [Improvement of magnetic properties in Bi-2212 ceramics by fluorine doping](#)

Author(s): Amira A, Mosbah MF, Molinie P, et al.  
Source: SOLID STATE SCIENCES Volume: 7 Issue: 1 Pages: 53-57 Published: JAN 2005  
Times Cited: 7



(10\*5)=50

#### 4. [Superconductivity of MgB2 wires](#)

Author(s): Yang, TR; Ilonca, G; Pop, AV, et al.

Conference Information: 23rd International Conference on Low Temperature Physics (LT23), Date: AUG 20-27, 2002 HIROSHIMA JAPAN

Source: PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS Volume: 388 Pages: 125-126 Published: 2003 , FI=1,192

Times Cited: [1](#)

1. Title: [Explosively Consolidated Powder-In-Tube MgB2 Superconductor Aided by Post-Thermal Treatment](#)

Author(s): Mamalis AG, Hristoforou E, Manolakos DE, et al. Source: IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY Volume: 19 Issue: 1 Pages: 20-27 Published: FEB 2009

Times Cited: 0

10\*1=10

#### 7. Title: [Transport properties and ac susceptibility of \(Bi<sub>1.6</sub>Pb<sub>0.4</sub>\)Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>1-x</sub>Cox\)\(3\)O-y superconductors](#)

Author(s): Ilonca, G; Pop, AV; Yang, TR, et al.

Conference Information: 2nd International Conference on Inorganic Materials, Date: SEP 13-16, 2000 SANTA BARBARA CALIFORNIA

Source: INTERNATIONAL JOURNAL OF INORGANIC MATERIALS Volume: 3 Issue: 7 Pages: 763-767 Published: 2001 FI= 0,891

Times Cited: [4](#)

1. Title: [Substitution of Sm at Ca site in Bi<sub>1.6</sub>Pb<sub>0.4</sub>Sr<sub>2</sub>Ca<sub>2</sub>-xSmxCu<sub>3</sub>Oy superconductors](#)

Author(s): Ozturk O, Akdogan M, Aydin H, et al. Source: PHYSICA B-CONDENSED MATTER Volume: 399 Issue: 2 Pages: 94-100 Published: NOV 1 2007

Times Cited: 0

2. Title: [The effect of Sm substitution on properties of Bi<sub>1.6</sub>Pb<sub>0.4</sub>Sr<sub>2</sub>Ca<sub>2</sub>-xSmxCu<sub>3</sub>Oy superconductors](#)

Author(s): Yilmazlar M, Aydin H, Varilci A, et al. Source: JOURNAL OF MATERIALS SCIENCE Volume: 42 Issue: 21 Pages: 9030-9036 Published: NOV 2007

Times Cited: [1](#)

3. Title: [Study of microstructure and magnetic properties in copper oxide superconducting systems through AC magnetic susceptibility](#)

Author(s): Bahgat AA, Shaisha EE, Saber MM Source: PHYSICA B-CONDENSED MATTER Volume: 399 Issue: 1 Pages: 70-76 Published: OCT 1 2007

Times Cited: 0

4. Title: [Investigation of the cooling rate in Bi\(Pb\)SrCaCuO high temperature superconductor by low field AC magnetic susceptibility](#)

Author(s): Yegen D, Terzioglu C, Gorur O, et al. Source: CHINESE JOURNAL OF PHYSICS Volume: 44 Issue: 3 Pages: 233-240 Published: JUN 2006

Times Cited: [4](#)

(10\*4)=40

#### [Transport and magnetic properties in \(Bi-1.6 Pb-0.4\)\(Sr1.8Ba0.2\)Ca-2\(Cu1-xCrx\)\(3\)O-y bulk](#)

**Author(s): Ilonca, G; Pop, AV; Jurcut, T, et al.**

**Conference Information: 22nd International Conference on Low Temperature Physics,**

**Date: AUG 04-11, 1999 HELSINKI UNIV TECHNOL HELSINKI FINLAND**

**Source: PHYSICA B Volume: 284 Pages: 1097-1098 Published: 2000 FI=0.893**

**Times Cited: 3**

1. Title: [Sol-Gel preparation of nonstoichiometric Bi,Pb-2223 superconductors](#)

Author(s): Zalga A, Grigoraviciute I, Kareiva A Source: CHEMIJA Volume: 18 Issue: 3 Pages: 7-10 Published: 2007

Times Cited: 0



2. Title: [Sol-gel synthesis and superconducting properties of Bi-2212 high-T-C superconductors](#)

Author(s): Zalga A, Beganskiene A, Kareiva A Source: POLISH JOURNAL OF CHEMISTRY Volume: 81 Issue: 9 Pages: 1547-1553 Published: SEP 2007

Times Cited: 2



3. Title: [Chromium substitution effects in Y-124 superconductor prepared by aqueous sol-gel method](#)

Author(s): Nenartaviciene G, Beganskiene A, Tautkus S, et al. Source: CHEMICAL PHYSICS Volume: 332 Issue: 2-3 Pages: 225-231 Published: FEB 14 2007

Times Cited: 2

**(10\*3)=30**

### **Transport phenomena in Zn-substituted Bi<sub>2</sub>Sr<sub>2</sub>Ca<sub>1-x</sub>Gdx (Cu<sub>1-y</sub>Zny)<sub>2</sub>O<sub>8+δ</sub>**

**Author(s): Ilonca, G; Pop, AV; Jurcut, T, et al.**

**Conference Information: 22nd International Conference on Low Temperature Physics,**

**Date: AUG 04-11, 1999 HELSINKI UNIV TECHNOL HELSINKI FINLAND**

**Source: PHYSICA B Volume: 284 Pages: 1099-1100 Published: 2000 FI=0.893**

**Times Cited: 2**

1. Title: [Study of the yttrium and zinc substitutions effects in Bi<sub>2</sub>Sr<sub>2</sub>CaCu<sub>2</sub>O<sub>8+δ</sub> compounds by transport measurements](#)

Author(s): Pignon B, Autret-Lambert C, Ruyter A, et al. Source: PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS Volume: 468 Issue: 11-12 Pages: 865-871 Published: JUN 15 2008

Times Cited: 0



2. Title: [Muon spin relaxation study of the anomalous magnetic behavior in excess-oxygen-doped La<sub>1.8</sub>Nd<sub>0.2</sub>CuO<sub>4+δ</sub> \(0.020 ≤ δ ≤ 0.101\)](#)

Author(s): Watanabe I, Oki N, Adachi T, et al. Source: PHYSICAL REVIEW B Volume: 73 Issue: 13 Article Number: 134506 Published: APR 2006

Times Cited: 1

**(10\*2)=20**

### **Effects of Y, Er and Lu substitution upon superconductivity in (Bi,Pb): 2223 system**

**Author(s): Pop, AV; Deac, IG; Ilonca, G, et al.**

**Conference Information: 22nd International Conference on Low Temperature Physics,**

**Date: AUG 04-11, 1999 HELSINKI UNIV TECHNOL HELSINKI FINLAND**

**Source: PHYSICA B-CONDENSED MATTER Volume: 284 Pages: 1101-**

**1102 Published: 2000 FI=0.893**

**Times Cited: 1**

1. Title: [Superconducting properties of ZnO-doped \(Bi, Pb\)-2223 thick film on Ni and NiO substrates prepared by spray deposition technique](#)

Author(s): Ogawa H, Kan A, Ohsashi M Source: PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS Volume: 468 Issue: 6 Pages: 447-452 Published: MAR 30 2008

Times Cited: 2

**(10\*1)=10**

**[Effect of 3d element substitution for Cu on the ac and dc magnetic properties of bulk \(Bi, Pb\): 2223 superconductor](#)**

**Author(s): Pop, AV**

**Source: SUPERCONDUCTOR SCIENCE & TECHNOLOGY Volume: 12 Issue: 10 Pages: 672-675 Published: OCT 1999 FI=2,05**

**Times Cited: 4**

1. Title: [AC susceptibility study of Bi<sub>1.66</sub>Pb<sub>0.34</sub>Sr<sub>2</sub>Ca<sub>2-x</sub>Mg<sub>x</sub>Cu<sub>3</sub>O<sub>y</sub> \(x=0, 0.2 and 0.4\) superconductor systems](#)

Author(s): Kameli P, Salamati H, Abdolhosseini I Source: JOURNAL OF ALLOYS AND COMPOUNDS Volume: 458 Issue: 1-2 Pages: 61-65 Published: JUN 30 2008

Times Cited: 1

2. Title: [Thermal and superconducting properties of glass-ceramic HTc BiSrCa\(CuPr\)O system](#)

Author(s): Aksan MA, Yakinci M E Source: JOURNAL OF MATERIALS PROCESSING TECHNOLOGY Volume: 196 Issue: 1-3 Pages: 365-372 Published: JAN 21 2008

Times Cited: 0

3. Title: [Effect of Mo substitution on the structural and transport properties of Bi<sub>2</sub>Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3-x</sub>Mo<sub>x</sub>O<sub>10+y</sub> system](#)

Author(s): Aksan MA, Yakinci M E Source: JOURNAL OF ALLOYS AND COMPOUNDS Volume: 433 Issue: 1-2 Pages: 22-32 Published: MAY 16 2007

Times Cited: 6

4. Title: [The effect of cooling rates on properties of Bi<sub>1.7</sub>Pb<sub>0.35</sub>Sr<sub>1.9</sub>Ca<sub>2.1</sub>Cu<sub>3</sub>O<sub>y</sub> superconductors produced by solid-state reaction method](#)

Author(s): Ozturk O, Yegen D, Yilmazlar M, et al. Source: PHYSICA C-SUPERCONDUCTIVITY AND ITS APPLICATIONS Volume: 451 Issue: 2 Pages: 113-117 Published: JAN 15 2007

Times Cited:

**(10\*4) -40**

**[Intergranular properties of \(Y<sub>1-x</sub>Zr<sub>x</sub>Ca<sub>y</sub>\)Ba<sub>2</sub>Cu<sub>3</sub>O<sub>7-delta</sub> compounds](#)**

**Author(s): Deac, IG; Burzo, E; Pop, AV, et al.**

**Source: INTERNATIONAL JOURNAL OF MODERN PHYSICS B Volume: 13 Issue: 13 Pages: 1645-1654 Published: MAY 30 1999**

**Times Cited: 1**

1. Title: [Enhancement of superconducting properties in Cu<sub>0.5</sub>Tl<sub>0.5</sub>Ba<sub>2</sub>Ca<sub>0.5</sub>M<sub>1.5</sub>Cu<sub>1.5</sub>Ni<sub>1.5</sub>O<sub>10-delta</sub> \(M = Mg, Be\) superconductors](#)

Author(s): Hassan N, Khan N A Source: MATERIALS CHEMISTRY AND PHYSICS Volume:

112 Issue: 2 Pages: 412-416 Published: DEC 1 2008  
Times Cited: 2

$(10*1)=10$

**: Effect of 3d element substitution for Cu on the ac and dc magnetic properties of bulk (Bi, Pb): 2223 superconductor**

**Author(s): Pop AV** Source: SUPERCONDUCTOR SCIENCE & TECHNOLOGY Volume: 12 Issue: 10 Pages: 672-675 Published: OCT 1999 ;FI=2,05  
Times Cited: 3

1. Title: [Thermal and superconducting properties of glass-ceramic HTc BiSrCa\(CuPr\)O system](#)

Author(s): Aksan MA, Yakinci ME Source: JOURNAL OF MATERIALS PROCESSING TECHNOLOGY Volume: 196 Issue: 1-3 Pages: 365-372 Published: JAN 21 2008  
Times Cited: 0

2. Title: [Structural characterization and transport properties of the HTc Bi<sub>2</sub>Sr<sub>2</sub>\(Ca,Cd\)Cu<sub>2</sub>O<sub>8</sub>+delta glass-ceramic rods](#)

Author(s): Aksan MA, Altin S, Balci Y, et al. Source: MATERIALS CHEMISTRY AND PHYSICS Volume: 106 Issue: 2-3 Pages: 428-436 Published: DEC 15 2007  
Times Cited: 1

3. Title: [Effect of Mo substitution on the structural and transport properties of Bi<sub>2</sub>Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3-x</sub>Mo<sub>x</sub>O<sub>10+y</sub> system](#)

Author(s): Aksan MA, Yakinci ME Source: JOURNAL OF ALLOYS AND COMPOUNDS Volume: 433 Issue: 1-2 Pages: 22-32 Published: MAY 16 2007  
Times Cited: 6

$(10*3) = 30$

**Superconducting properties in bulk (Bi<sub>1.6</sub>Pb<sub>0.4</sub>)(Sr<sub>1.8</sub>Ba<sub>0.2</sub>)Ca<sub>2</sub>Cu<sub>3</sub>O<sub>y</sub> system**

**Author(s): Pop, AV; Ciurchea, D; Ilonca, G, et al.**  
**Conference Information: International Conference on Materials and Mechanisms of Superconductivity - High Temperature Superconductors V, Date: FEB 28-MAR 04, 1997 BEIJING PEOPLES R CHINA**  
**Source: PHYSICA C Volume: 282 Pages: 2365-2366 Published: 1997 ; FI=3.258**  
**Times Cited: 1**

1. Title: [Magnetoresistance behavior in the \(BiPb\)<sub>2</sub>Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>O<sub>x</sub> thin films](#)

Author(s): Aksan MA, Yakinci ME, Guldeste AS Source: THIN SOLID FILMS Volume: 515 Issue: 20-21 Pages: 8022-8027 Published: JUL 31 2007  
Times Cited: 0

$(10*1)=10$

**Intergranular critical currents and excess conductivity in the Fe-substituted Bi-2223 high Tc superconductor**

**Author(s): Harabor, A; Pop, AV; Deltour, R, et al.**  
**Conference Information: International Conference on Physics and Chemistry of Molecular and Oxide Superconductors, Date: AUG 02-06, 1996 KARLSRUHE GERMANY**  
**Source: JOURNAL OF LOW TEMPERATURE PHYSICS Volume: 105 Issue: 3-4 Pages: 1053-1059 Published: 1996 ;FI=1,576**  
**Times Cited: 1**

1. Title: [Short-wavelength fluctuation regime in paraconductivity of bulk monophasic \(Bi,Pb\)-2223 superconductor system](#)

Author(s): Harabor A, Harabor NA, Deletter M

Conference Information: Joint Conference on Fundamental and Applied Research in Physics, OCT 24-29, 2005 Iasi, ROMANIA  
Source: JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS Volume: 8 Issue: 3 Pages: 1072-1076 Published: JUN 2006

Times Cited: 0

(10\*1)=10

[Effect of Fe substitution on the magnetic and electrical properties of the \(Bi<sub>1.6</sub>Pb<sub>0.4</sub>\)\(Sr<sub>1.8</sub>Ba<sub>0.2</sub>\)Ca<sub>2</sub>\(Cu<sub>1-x</sub>Fe<sub>x</sub>\)<sub>3</sub>O<sub>y</sub> superconductor](#)

Author(s): Pop, AV; Ilonca, G; Ciurchea, D, et al.

Source: JOURNAL OF ALLOYS AND COMPOUNDS Volume: 241 Issue: 1-2 Pages: 116-120 Published: AUG 1 1996 ;FI=0,909

Times Cited: 4

1. Title: [AC susceptibility study of Bi<sub>1.66</sub>Pb<sub>0.34</sub>Sr<sub>2</sub>Ca<sub>2-x</sub>Mg<sub>x</sub>Cu<sub>3</sub>O<sub>y</sub> \(x=0, 0.2 and 0.4\) superconductor systems](#)

Author(s): Kameli P, Salamati H, Abdolhosseini I  
Source: JOURNAL OF ALLOYS AND COMPOUNDS Volume: 458 Issue: 1-2 Pages: 61-65 Published: JUN 30 2008

Times Cited: 1

□ 2. Title: [Thermal and superconducting properties of glass-ceramic HTc BiSrCa\(CuPr\)O system](#)

Author(s): Aksan MA, Yakinci M  
Source: JOURNAL OF MATERIALS PROCESSING TECHNOLOGY Volume: 196 Issue: 1-3 Pages: 365-372 Published: JAN 21 2008

Times Cited: 0

□ 3. Title: [Preparation of nano-scale magnetite Fe<sub>3</sub>O<sub>4</sub> and its effects on the bulk bi-2223 superconductors](#)

Author(s): Ghazanfari N, Kilic A, Ozcan S, et al.

Conference Information: 1st Sharjah International Conference on Nanotechnology and Its Applications, APR 10-12, 2007 Sharjah, U ARAB EMIRATES  
Source: Nanotechnology and Its Applications Book Series: AIP CONFERENCE PROCEEDINGS Volume: 929 Pages: 133-137 Published: 2007

Times Cited: 0

□ 4. Title: [Effect of Mo substitution on the structural and transport properties of Bi<sub>2</sub>Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3-x</sub>Mo<sub>x</sub>O<sub>10+y</sub> system](#)

Author(s): Aksan MA, Yakinci M  
Source: JOURNAL OF ALLOYS AND COMPOUNDS Volume: 433 Issue: 1-2 Pages: 22-32 Published: MAY 16 2007

Times Cited: 6

(10\*4)=40

[Texture, morphology and deformation mechanisms in beta-transformed Zircaloy-4](#)

Author(s): Ciurchea, D; Pop, AV; Gheorghiu, C, et al.

Source: JOURNAL OF NUCLEAR MATERIALS Volume: 231 Issue: 1-2 Pages: 83-91 Published: JUL 1996 ;FI=1,306

Times Cited: 5

1. Title: [Texture memory and variant selection during phase transformation of a zirconium alloy](#)

Author(s): Romero J, Preuss A, da Fonseca JQ  
Source: ACTA MATERIALIA Volume: 57 Issue: 18 Pages: 5501-5511 Published: OCT 2009

Times Cited: 0

□ 2. Title: [Capturing the texture changes in a zirconium alloy during the allotropic phase transformation](#)

Author(s): Romero J, Preuss M, da Fonseca JQ Source: SCRIPTA MATERIALIA Volume: 61 Issue: 4 Pages: 399-402 Published: AUG 2009

Times Cited: 1

3. Title: [Hydrides effect on the SCC initiation on zircaloy-4 claddings](#)

Author(s): Dinu A, Radulescu M, Ionescu D, et al.

Conference Information: 4th International Conference on Materials and Manufacturing Technologies (MATEHN 06), SEP 21-23, 2006 Cluj Napoca, ROMANIA Source: MATERIALS AND TECHNOLOGIES Book Series: ADVANCED MATERIALS RESEARCH Volume: 23 Pages: 249-252 Published: 2007

Times Cited: 0

□ 4. Title: [In situ observation of texture evolution during alpha ->beta and alpha ->beta phase transformations in titanium alloys investigated by neutron diffraction](#)

Author(s): Lonardelli I, Gey N, Wenk HR, et al. Source: ACTA MATERIALIA Volume: 55 Issue: 17 Pages: 5718-5727 Published: OCT 2007

Times Cited: 7

□ 5. Title: [Stress corrosion cracking of hydrided zircaloy-4-claddings in iodine containing environments](#)

Author(s): Dinu A, Abrudeanu M Source: REVISTA DE CHIMIE Volume: 58 Issue: 8 Pages: 751-754 Published: AUG 2007

Times Cited: 0

$(10*5)=10$

### [Transport properties and ac susceptibilities of \(Bi<sub>1.6</sub>Pb<sub>0.4</sub>\)\(Sr<sub>1.8</sub>Ba<sub>0.2</sub>\)Ca-2\(Cu<sub>1-x</sub>Ni<sub>x</sub>\)\(3\)O-y superconductor](#)

Author(s): Pop, AV; Ilonca, G; Ciurchea, D, et al.

Source: INTERNATIONAL JOURNAL OF MODERN PHYSICS B Volume: 10 Issue: 8 Pages: 967-976 Published: 1996 ;FI=1,108

Times Cited: 2

1. Title: [Thermal and superconducting properties of glass-ceramic HTc BiSrCa\(CuPr\)O system](#)

Author(s): Aksan MA, Yakinci M Source: JOURNAL OF MATERIALS PROCESSING TECHNOLOGY Volume: 196 Issue: 1-3 Pages: 365-372 Published: JAN 21 2008

Times Cited: 0

□ 2. Title: [Effect of Mo substitution on the structural and transport properties of Bi<sub>2</sub>Sr<sub>2</sub>Ca<sub>2</sub>Cu<sub>3</sub>-xMoxO<sub>10+y</sub> system](#)

Author(s): Aksan MA, Yakinci M Source: JOURNAL OF ALLOYS AND COMPOUNDS Volume: 433 Issue: 1-2 Pages: 22-32 Published: MAY 16 2007

Times Cited: 6

$(10*2)=20$

### [MAGNETIC STUDIES ON MN-SUBSTITUTED Y-BA-CU-O](#)

Author(s): POP, AV; ILONCA, G; CIURCHEA, D, et al.

Source: JOURNAL OF ALLOYS AND COMPOUNDS Volume: 223 Issue: 1 Pages: 56-

59 Published: MAY 15 1995 ;FI=0,909

Times Cited: 2

1. Title: [The influence of Mn doping on the thermal expansion of the high T-C superconductor YBa<sub>2</sub>\(Cu<sub>1-x</sub>Mnx\)<sub>3</sub>O-y](#)

Author(s): Rao A, Radheshyam S, Kumar R, et al. Source: JOURNAL OF PHYSICS-CONDENSED MATTER Volume: 19 Issue: 5 Article Number: 056208 Published: FEB 7

2007

Times Cited: 0



2. Title: [Effect of Mn doping on the specific heat of the high T-C superconductor REBa<sub>2</sub>Cu<sub>3</sub>O<sub>y</sub> \(RE = Y, Gd\)](#)

Author(s): Rao A, Radheshyam S, Das A, et al. Source: JOURNAL OF PHYSICS-CONDENSED MATTER Volume: 18 Issue: 11 Pages: 2955-2962 Published: MAR 22 2006

Times Cited: 7

(10\*2)=20

#### PARACONDUCTIVITY AND HALL-EFFECT MEASUREMENTS IN THE SUPERCONDUCTING (BIPB)<sub>2</sub>(SRBA)<sub>2</sub>CA-2(CU<sub>1</sub>-XCX)<sub>3</sub>O-Y

Author(s): POP, AV; ILONCA, GH; CIURCHEA, D, et al.

Source: INTERNATIONAL JOURNAL OF MODERN PHYSICS B Volume: 9 Issue: 6 Pages: 695-705 Published: MAR 15 1995

Times Cited: 2

1. Title: [A study on thermoelectric power and electrical properties of Bi-2223 superconductors sintered for different time periods](#)

Author(s): Saleh SA, Ahmed SA, Elsheikh EMM Source: JOURNAL OF SUPERCONDUCTIVITY AND NOVEL MAGNETISM Volume: 21 Issue: 3 Pages: 187-192 Published: APR 2008

Times Cited: 1



2. Title: [Influence of sintering temperature on excess conductivity in Bi-2223 superconductors](#)

Author(s): Ibrahim EMM, Saleh SAS Source: SUPERCONDUCTOR SCIENCE & TECHNOLOGY Volume: 20 Issue: 7 Pages: 672-675 Published: JUL 2007

Times Cited: 2

(10\*2)=20

#### 4. Distincții, premii și alte recunoașteri naționale și internaționale:

**Total: 10p**

Se acorda 10 puncte pentru fiecare distincție, premiu

Formula de calcul: 10 puncte x nr. distinctii, premii

Premiul "Stefan Procopiu" acordat de Academia Romana in anul 2007

10\*1=10

#### 5. Studenți naționali atrași (activități de coordonare științifică și didactică): **Total =109**

- Îndrumare lucrari de licență (număr lucrări susținute):

Formula de calcul:

3 puncte x [(număr de proiecte, lucrări de licența) / număr de conducători științifici]



$$3 * 9 \text{ lucr. sustinute} = 27$$

1. Efectul ionilor 3d asupra proceselor intergranulare din sistemul (Bi,Pb):2223, abs. Jitaru Daniel, anul 2005,
2. Influenta temperaturii substratului asupra proprietatilor structurale a filmelor de Bi:2212, abs. Timar Iulian Andrei, anul 2006.
3. Studiul proceselor disipative intergranulare in supraconductorul (Bi,Pb):2223 prin masuratori de susceptibilitati magnetice, abs. Hertely Izabella, 2006.
4. Caracterizarea structurii cristaline si a rezistivitatii electrice a filmelor subtiri de Bi:2212, abs. Cotuna Teodora, anul 2007.
5. Studiul fenomenelor intergranulare in compusi HTS folosind masuratori de susceptibilitati AC, abs. Anica Ovidiu, 2007.
6. Influenta parametrilor de sinteza asupra rezistivitatii electrice a compusului oxidic supraconductor (Bi,Pb):2223, abs. Rosu Ioana Anca, 2008.
7. Metode de sinteza a straturilor subtiri, abs. Haidu Francisc, 2008.
8. Supraconductibilitatea, abs. Okos Alexandru, 2008.
9. Influenta substitutiei partiale a Ca cu R=Y,Er,Lu asupra proprietatilor structurale ale supraconductorului (Bi,Pb):2223, abs. Savan Constantin, 2008.

**- Îndrumare lucrări de disertație (număr lucrări susținute)**

$$4 \text{ puncte} \times [(\text{număr de lucrări de masterat conduse}) / \text{număr de conducători științifici}]$$

$$4 * 3 = 12$$

1. Effect of oxygen concentration on electrical resistance of Bi:2201 thin films, abs. Manolache Silvia, 2005
2. Structural and electrical characterization of Bi:2212 thin films synthesized by DC magnetron sputtering, abs. Danciu Mihai, 2007
3. abs. Hertely Izabella, 2008

**- Doctoranzi (lista nominală a doctoranzilor înmatriculați resp. lista nominală a tezelor susținute)**

Formula de calcul:

$$6 \text{ puncte} \times \text{nr. doctoranzi înmatriculați} = 6 * 7 = 42$$

1. Danciu Mihai
2. Gainar Florin
3. Pop Ionut
4. David Bogdan
5. Garbovan Dorina
6. Manolache Silvia
7. Coldea Roxana

$$10 \text{ puncte} \times \text{nr. teze sustinute} = 10 * 2 = 20$$

1. Marconi Daniel
2. Matei Iulian

$$15 \text{ puncte} \times \text{nr. teze co-tutela sustinute}$$

**- Post-doctoranzi (lista nominală)**

Formula de calcul:

$$8 \text{ puncte} \times \text{nr. post-doctoranzi} = 8 * 1 = 8$$

1. Marconi Danie



## 8. Membru in comitetul de redacție la reviste BDI : Total 5p

Formula de calcul:  
5 puncte x nr. comitete  
Revista Studia-Physica

## 10. Participări la programe/granturi finanțate din sursă națională (se menționează și valoarea) Total: 175,05

- Formula de calcul: valoarea in RON / 10.000
1. Tehnologie de obtinere a straturilor anticorozive prin codepuneri compozite cu particule nanometrice, NANOTECH, 2007-2009, ANCS, Director C. Bulea, Responsabil UBB Prof. Dr. Liana Muresan, Universitatea Babes Bolyai Cluj Napoca, Facultatea de Chimie  
 $202.000/10.000=20,2$
  2. Tehnologie inovativa de obtinere a straturilor din aliaj zinc-nichel cu proprietati anticorozive prin codepuneri compozite cu particule nanometrice, ZINITECH, 2008-2011, ANCS, Director C. Bulea, Responsabil UBB Prof. Dr. Liana Muresan, Universitatea Babes Bolyai Cluj Napoca, Facultatea de Chimie  
 $70.000/10.000=7$
  3. Materiale magnetice cu performante superioare Contract CEEX, 215-2/2006 (membru A.V.Pop, responsabil partener I.G.Deac)  
 $249.000/10.000=24,9$
  4. Metode computationale de inalta performanta in modelarea si proiectarea materialelor nanomagnetice Contract CEEX, 215-2/2006 (membru A.V.Pop, responsabil partener I.G.Deac)  
 $147500.000/10.000=14,75$
  5. Magnetismul clusterilor in interactiune: procese fundamentale, Contract CEEX, 215-2/2006 (membru A.V.Pop, responsabil partener I.G.Deac)  
 $225.000/10.000=22,5$
  6. Pulberi si materiale nanocristaline magnetice moi, pe baza de Fe si Ni obtinute prin mecanosinteza. Preparare, proprietati, realizarea de compacte nanocristaline pentru aplicatii, Proiect PNCDI II 71-015/2007 (membru A.V.Pop, responsabil partener I.G.Deac)  
 $200.000/10.000=20$
  7. Filme epitaxiale de YBCO cu nanocentri de pinning puternic corelați pentru cabluri supraconductoare de temperatură înaltă (NANOPIN) 2007, MEC PNCD2 PC (Parteneriate) nr. 71-045/2007 , 200.000 Lei (membru A.V.Pop , responsabil I.G.Deac)  
 $200.000/10.000=20$
  8. Transport de spin si sarcina prin tunelare in compozite cu semimetale cu polarizare de spin inalta (COMPOSPIN) CEEX 45, 2006, MEC 150.000 Lei (membru A.V.Pop, responsabil partener I.G.Deac)  
 $150.000/10.000=15$
  9. Materiale supraconductoare cu temperatura critica ridicata (MSTR) 2005 CEEX 73 , MEC , 150.000 Lei (membru A.V.Pop, responsabil partener I.G.Deac)  
 $150.000/10.000=15$

10. *Dinamica si structura fluxului in supraconductori nanostructurati sau cvasi-bidimensionali (FLUXDIN)*, CEEEX 21, 2006, MEC 150.000 Lei (membru A.V.Pop, responsabil partener I.G.Deac -cu finantare din 2007

$$150.000/10.000=15$$

## 12. Coordonări de programe/granturi finanțate din sursă națională (se menționează și valoarea)

$$\text{Total } 62,37 * 2 = 126,54$$

Formula de calcul: valoarea intrata in UBB in RON / 10.000

1. STUDIUL DINAMICII VORTEXURILOR INTERGRANULARE DIN COMPUSII HTS IN CAMP MAGNETIC ALTERNATIV, GAR 2007-2008; Director Prof. Dr. Pop Aurel, Universitatea Babes Bolyai Cluj Napoca, Facultatea de Fizica

$$6000/10.000=0.6$$

2. STUDIUL FENOMENELOR DE TRANSPORT SI MAGNETICE IN SUPRACONDUCTORII CUPRATI PE BAZA DE BISMUT SI RUTENIU DOPATI CU IONI AI METALELOR DE TRANZITIE SI AI PAMANTURILOR RARE GAR 2007-2008; Director Prof. Dr Pop Aurel, Universitatea Babes Bolyai Cluj Napoca, Facultatea de Fizica

$$6200/10.000=0.62$$

3. *Cercetari privind sinteza si caracterizarea materialelor avansate cu aplicatie supraconductoare si tribologice*, 2007-2010, PNII PC, Director Prof. Dr. Pop Aurel, Universitatea Babes Bolyai Cluj Napoca, Facultatea de Fizica

$$573.575/10.000=57,3575$$

4. *Studiul influentei defectelor si incluziunilor nanometrice asupra proceselor disipative in supraconductorii HTS*, 2005-2007, CNCSIS, Tip A, Nr. 34701/2005, tema 22, cod CNCSIS 190, Director Prof. Dr. Pop Aurel, Universitatea Babes Bolyai Cluj Napoca, Facultatea de Fizica

$$37931/10.000=3,7931$$

## 14. Membru în comisii profesionale relevante, cu titlu oficial **Total :25**

Formula de calcul: 5 puncte x nr. invitatii  
Vicepresedinte a sectiei FCS a Societatii Romana de Fizica  $1*5=5$   
Membru evaluator al ARACIS  $5* 4\text{invitatii}= 20$

## 15. Conferințe invitate internaționale **Total:20**

Se acorda 20 puncte pentru fiecare Conferința si se tine cont de numărul de autori.  
International Conference TIM-08 , Timisoara 28-29 November 2008,  
 $1*20 =20$

Semnatura