

Short Biography of Dr. Pramod H Borse (<http://orcid.org/0000-0002-2577-8754>)



Dr Pramod H. Borse is PhD in Physics from Department of Physics in Pune University and has made several contributions in Applied Physics. He has been working in nanomaterials for various applications since 1992, which includes his MSc thesis, with the work on nanophase alumina. His PhD thesis was on preparation of nanoparticle sulphide photo-luminescent material systems. After that he undertook the job of Post graduate teaching and research in Pune University. Later, he spent his professional time (2001-2008) at Pohang University of Science and Technology (POSTECH), South Korea in various capacities.

Presently he is working at senior position as a Scientist in DST, India lab. *i.e.* International Advanced Research Center for Powder Metallurgy and New Materials, (ARCI), Hyderabad, India. He has been *senior member* of *Optical society of America* (OSA) and IEEE society. He has been working towards developing Solar Hydrogen and Sensor technology. In India, he has been an elected *fellow* for *Telangana Academy of Sciences* (TAS) and *Maharashtra Academy of Sciences* (MAS). He has undertaken research activities in the frontier areas such as Nanomaterial synthesis of semiconductor and oxides systems, Solar energy materials, Solar Hydrogen production materials, X-ray based nano-film processing, Photocatalysis, Thermoelectric material, Condensed Matter Physics *etc.* He has theoretically designed several new visible light photocatalysts and experimentally synthesized around fifty different type of efficient oxide, sulfide, composite, diode configured visible light photocatalysts. He has developed various ferrite and 2D metal chalcogenide-based materials systems. He has also developed a rapid nano-crystal ferrite methodology for hydrogen production as well as magnetic applications. He has also developed opto-electronic and gas sensors for commercial applications. He has worked on number of international projects those are sponsored by POSCO steel, Samsung Electronics, General Motors. His Scopus Citation is 3892 and h-index is 31, and has published total ~99 SCI Journal articles with high impact factor journals. Similarly, his Goggle scholar citation index rates to 4753, h-index 34 and i10-index as 60, and Research Gate score as RG 40.47. He has also published 7 book chapters. He has prepared 3 Indian patents and one India patent is granted.

1. **Name:** PRAMOD H. BORSE **FTAS, FMAS**

2. **Qualification** PhD (*PHYSICS-Nano*)

3. **Designation** SCIENTIST -F

4. **Contact information:**

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5. **Education:** BSc, MSc, & PhD in Physics from Department of Physics, SPPU, Pune, India

6. **Professional Career:** 27 years of experience in Renewable Energy, Nano Material Physics and IOT based Sensor applications, of which 8 years of experience *outside India*

Present (Since-2014): **Scientist -F, ARC-International, Hyderabad, India**

Past : **Scientist -E, ARC-International, Hyderabad, India**

Research Professor, Chemical Engg. Dept. POSTECH, **S. Korea**
Post-Doctoral fellow, Materials Engg. Dept. POSTECH, **S. Korea**
Assistant Professor in Physics, Pune University, Pune, **India**
Research PhD Scholar, Physics, Pune University, Pune, **India**
Research Assistant, National Chemical Laboratory, Pune, **India**

7. Honors and Awards :

- H-Index 34 , i10-index 59
- Elected **Fellow** of Telangana Academy of Sciences FTAS 2019
- Elected **Fellow** of Maharashtra Academy of Sciences FMAS 2018
- Brain Korea postdoctoral Research Fellowship (BK-21), POSTECH, S.Korea, 2001
- Fast Track Scheme for Young Scientist project award, Government of India, 2002
- Reviewer for various Elsevier, **RSC** , **ACS** , Wiley and AIP journals
- Recognized PhD guide for Osmania University, Andhra University, University of Hyderabad and IIT Hyderabad

8. Membership with Professional and Scientific bodies :

- **Fellow** of Telangana Academy of Sciences (TAS) -2019 (Awarded Jan 2021)
- **Senior** Member Optical Society of America(OSA) (*since 2020*)
- **Senior** Member IEEE society -2020
- **Life** Member Sensor research society of India (SRS) - 2019
- **Fellow** of Maharashtra Academy of Sciences (MAS) since Dec 2018
- Life Member of Indian Physics Association (IPA)
- Life member Material Research Society of India (MRSI)
- Life member Solar Energy Society of India (SESI)
- Life Member of Indian society for electro analytical chemistry
- Special Member of International Solar Energy Society (*since 2009*)
- Special Member of Optical Society of America(OSA) (*since 2009*)
- OSI Fellow, Optical society of India (*since 2010*)
- Member American Physical Society(APS) (*since 2009*)
- Member of International Electrochemical Society (*since 2010*)
- **Member** of Institute of Physics (IOP), UK(*since 2009*)
- Section Editor for Handbook of Advanced Ceramics and Composites. Springer, Cham 2020
- Editorial Board member of Indian Jou. of Material Science (2011-2016)
- Editorial Board member of Inter Jou. of Photo Energy (2010-2015)
- Editorial Board member of Material Science Research India (2012-2017)

EVENTS

- Co-convener “One Day workshop on Advanced Sensor Material Devices ASMD-2019” at ARCI Hyderabad 23rd Aug 2019.
- Organizing Member for ICONSAT 2012 Hyderabad.
- Convener “Advanced Workshop on Evaluation of H₂ producing technologies for Industry relevant Application” at ARCI Hyderabad 8-9 Feb 2013

9. Research Areas of Interest –

Energy Materials: Luminescent, Solar, Thermoelectric, Magnetic
Renewable Energy generation, Sensors, Environment Agriculture Sensors
Thin-film deposition: Physical, Chemical, Radiation(synchrotron/laser)
Assisted methods
Condensed Matter Physics – Material modeling by computational physics

10. Technology development Interest, participation and contribution–

- Indian Startup Industry contribution – Optical sensor development and technology for economic planar photodetector
- TMT Consortium & others- Sensor Development (*solar photo-detection, high Temperature, Environmental & Toxic gas*)
- POSCO Korea - Real time synchrotron x-ray imaging for medical diagnostics, Samsung electronics (SAIT, Korea) - Nano- Phosphor development for electronic Displays
- General Motors (GM project) Korea – Solar hydrogen generator

11. Research Guide :

Guided 2 (2 ongoing) PhD students, 30 (2 ongoing) M.Tech. students, 1 MPhil Student

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12. Publications & Patents:

a. International Peer reviewed papers (~100# by 2021) -

1. Mane, R.B., Sahoo, R., Reddy, B.K.S., Ravula, V., Panigrahi, B.B., **Borse, P.H.**, Chakravarty, D, “Doping-induced coloration in titania”, Journal of the American Ceramic Society 104 (7), pp. 2932-2936, 2021
2. Reddy, B.K.S., **Borse, P.H.**, “Review—recent material advances and their mechanistic approaches for room temperature chemiresistive gas sensors”, Journal of the Electrochemical Society 168 (5), art. no. 057521, 2021
3. A Karati, T Parida, J Gupta, HK Adigilli, **Borse, P.H.** J Joardar., “Band-gap engineering in novel delafossite-type multicomponent oxides for photocatalytic degradation of methylene blue”, Materials Research Bulletin 137, 111181, 2021
4. Madhurima V, **Borse, P.H.** Kumari K, Jain P., “Improved photocatalytic activity of carbon-based polymeric semiconductor for efficient decontamination of wastewater: Effect of reaction atmosphere and pyrolysis temperature”, Optical Materials, Vol.110, p 10053, 2020
5. J. Gupta, D. Das, **Borse, P.H.**, “Nanosheets Decorated MoS₂ Micro Balls: Effect of 1T/2H Composition”, Chemistry Select, Vol.5, p 11764-11768, 2020
6. Pandi, N Sonawane, SH Gumfekar, SP **Borse, P.H.** et al, Halloysite nanotube based super capacitor, preparation using sonochemical approach and its electrochemical performance, Energy, ecology and environment, Vol 6, 13-25, 2021
7. Pareek, A., R. Dom, J.Gupta, J.Chandran, A.Vivek, and **Borse, P.H.**, Insights into renewable hydrogen energy: Recent advances and prospects, Mat Sci Ene Tech 2020; 3, 319-327

8. R Dom, S Govindarajan, SV Joshi, **Borse, P.H.**, Solar-responsive zinc oxide photo anode for solar-photon-harvester photoelectrochemical (PEC) Cell”, *Nanoscale Advances*, Vol.230, p 337-346, 2020
9. Pandi, N Sonawane, SH Gumfekar, SP Kola, AK **Borse, P.H.** Ambade, SB Guptha, S Ashokkumar, M F, Electrochemical Performance of Starch-Polyaniline Nanocomposites Synthesized By Sonochemical Process Intensification, *JOURNAL OF RENEWABLE MATERIALS*, Vol.7, p 1279-1293, 2019
10. Kumar, K.S, Medhi, H., Banik, D., Suresh, M.B., **Borse, P.H.**, Paik, P, Novel mesoporous SiO₂ conjugated graphene oxide 2D layers: Frequency and temperature dependent dielectric properties”, *Mater. Chem Phys.*, Vol.230, p 337-346, 2019
11. Pareek, A., Paik P., Joardar, J, Murugan, K., and **Borse, P.H.**, Effective Fabrication of conducting polymer modified CdS photoanodes for photoelectrochemical cell, *Thin Solid Films* 2018; 661(1), 84-91 (IF: 1.939, PCI: 0.387) Cite: 0
12. C.W.Ahn, **P.H. Borse**, J.H.Kim, J.Y.Kim, C.Cho, J.H.Yoon, B.Lee, J.S.Bae, J.S.Lee and H.G.Kim Effective charge separation in site-isolated Pt-nanodot deposited PbTiO₃ nanotube arrays for enhanced photoelectrochemical water splitting, *Applied Catalysis B-Environmental* 2018; 224(8), 804-809 (IF: 10.92, PCI: 1.09) Cite: 2
13. Dom, R., Kim H.G. and., **Borse, P.H**, Photo Chemical Hydrogen Generation from Orthorhombic CaFe₂O₄ Nanoparticles Synthesized by Different Methods , *Chemistry Select* 2017; 2 (8), 2556-2564. (IF: 1.505, PCI: 0.501) Cite: 3
14. Dom, R., Baby L.R., , Kim H.G. and., **Borse, P.H**, Fe controlled charge-dynamics in ZnO for Solar hydrogen generation , *Intern Jou Hydrogen Energy* 2017; 42 (9), 5758-5767. (IF: 4.1, PCI: 1.025) Cite: 3
15. Pareek, A., Paik P., Kim H.G. Joardar J. and., **Borse, P.H**, Nano-architecture based photoelectrochemical water oxidation efficiency enhancement by CdS photoanodes, *Mater Res. Express* 2017; 4 (2), 026203-026203 (IF: 1.151, PCI: 0.23) Cite:0
16. Pareek, A., Paik P., Kim H.G. and., **Borse, P.H**, Ultrathin MoS₂-MoO₃ nanosheets functionalized CdS photoanodes for effective charge transfer in photoelectrochemical (PEC) cells , *Jou Mat Chem A* 2017; 5 (4), 1541-1547 (IF: 9.61, PCI: 2.402) Cite: 6
17. Pareek, A., Thotakuri R., Dom R, Kim H.G. and., **Borse, P.H**, Nanostructure Zn-Cu co-doped CdS chalcogenide electrodes for opto-electric-power and H₂ generation , *Intern Jou Hydrogen Energy*, 2017; 42 (1), 125-132 (IF: 4.1, PCI: 0.82) Cite:1
18. **P.H. Borse**, “Nanostructured Electrodes of Metal Sulfide-Chalcogenides for Energy Applications”, *Nanotech Insights*, 2016; 7 (3 & 4), 22-28. (IF: x.0, PCI: 0.xx) Cite:x

19. Rani, S., **Borse, P.H.**, Pareek, A., Rajalakshmi, N., Dhathathreyan, K.S. Photo-current enhancement in carbon quantum dots functionalized titania nanotube arrays, Journal of Nanoscience and Nanotechnology, 2016; 16 (6), 5999-6004. (IF: 1.6, PCI: 0.32) Cite:0
20. Pareek, A., Gopalakrishnan A., **Borse, P.H.** Efficiency and stability aspects of CdS photo anodes for solar hydrogen generation technology, Journal of Physics: Conference Series 2016;755, 012006
21. Pareek, A., Paik, P., **Borse, P.H.** Stable hydrogen generation from Ni- and Co-based co-catalysts in supported CdS PEC cell Dalton Transactions, 2016; 45 (27), 11120-11128. (IF: 4.099, PCI: 1.366) Cite:3
22. Murugan, K., Joardar, J., Gandhi, A.S., Murty, B.S., **Borse, P.H.** Photo-induced monomer/dimer kinetics in methylene blue degradation over doped and phase controlled nano-TiO₂ films RSC Advances, 2016; 6 (49), 43563-43573. (IF: 3.12, PCI: 0.622)Cite:2
23. Dom, R., **Borse, P.H.**, Hong, K.-S., Choi, S., Lee, B.S., Ha, M.G., Kim, J.P., Jeong, E.D., Kim, H.G. Nanocrystalline magnesium ferrite prepared for photocatalytic applications by using the polymerized complex method, Journal of the Korean Physical Society, 2015; 67 (9), 1639-1645. (IF: 0.42, PCI: 0.047) Cite:2
24. Pareek, A., Paik, P., Borse, P.H, **Borse, PH.** Role of transition metal-hydroxide (M-OH_x, M=Mn, Fe, Ni, Co) Co-catalyst loading: Efficiency and stability of CdS photoanode Materials Research Society Symposium Proceedings 2015, 1776, 1-6. (IF: 0.3, PCI: 0.1) Cite: 3
25. Dom, R, Chary, AS , **Borse, PH.** Solar hydrogen generation from spinel ZnFe₂O₄ photocatalyst: Effect of synthesis methods. INTERNATIONAL JOURNAL OF ENERGY RESEARCH 2015;39(10):1378-1390. (IF: 2.73, PCI: 0.91) Cite: 28
26. Pareek, A., Paik, P., **Borse PH.** Nanoniobia modification of CdS photoanode for an efficient and stable photoelectrochemical cell. Langmuir 2014;30(51):15540-15549. (IF: 4, PCI: 1.33) Cite:23
27. Dom, R., Kim, H.G., **Borse PH.** Efficient hydrogen generation over (100)-oriented ZnO nanostructured photoanodes under solar light. CrystEngComm 2014;16(12): 2432-2439. (IF: 3.474, PCI:1.158) Cite: 13
28. Pareek, A., Purbia, R., Paik, P., Hebalkar, N.Y., Kim, H.G., **Borse PH.** Stabilizing effect in nano-titania functionalized CdS photoanode for sustained hydrogen generation. Int J Hydrogen Energy 2014;39(9): 4170-4180. (IF: 4.1, PCI: 0.6833) Cite: 20
29. **Borse PH,** Lim, K.T., Yoon, J.-H., Bae, J.S., Jeong, E.D., Kim, H.G. Investigation of the physico-chemical properties of Sr₂FeNb_{1-x}W_xO₆ (0.0 ≤ x ≤ 0.1) for visible-light photocatalytic water-splitting applications. Journal of the Korean Physical Society 2014;64(2): 295-300. (IF: 0.42, PCI: 0.07) Cite:3

30. **Borse** PH., Das D. Advance Workshop Report on Evaluation of Hydrogen Producing Technologies for Industry Relevant Application ARCI, Hyderabad, India 8–9 February 2013(Vol36,p811470,2013-erratum). Int J Hydrogen Energy 2014;39(4):1903-1903.
(IF: 4.1, PCI: 2.05) Cite: 0
31. Pareek, A., Paik, P., **Borse** PH. Characterization of Nano-Titania Modified CdS /Polysulfide Electrolyte Interface by Utilizing Mott-Schottky and Electrochemical Impedance Spectroscopy. Electroanalysis 2014;26(11):2403-2407. (IF: 3.012, PCI: 1.004) Cite: 4
32. Cha, Y.J., Bae, J.S., Hong, T.E., Kim, H.G., **Borse** PH. Structural, optical and visible-light photocatalytic properties of Sr₃FeNb₂O₉ oxide. Journal of the Korean Physical Society 2014;65(4):520-525.
(IF: 0.42, PCI: 0.084) Cite:1
33. Hong, K.S., Jeong, E.D., Kim, H.G., **Borse** PH. Optical properties and glass-forming region of the K₂O-Sm₂O₃-TeO₂ glass system. Journal of the Korean Physical Society 2014;65(9):1453-1456.
(IF: 0.42, PCI: 0.102) Cite:0
34. Vijayasankar, K., Hebalkar, N.Y., Kim, H.G., **Borse** PH. Controlled band energetics in Pb-Fe-Nb-O metal oxide composite system to fabricate efficient visible light photocatalyst. Journal of Ceramic Processing Research 2013;14(4):557-562. (IF: 0.39, PCI: 0.1) Cite:1
35. Pareek, A., Hebalkar, N.Y., **Borse** PH. Fabrication of a highly efficient and stable nano-modified photoanode for solar H₂ generation. RSC Advances 2013;3(43):19905-19908.
(IF: 3.12, PCI: 1.04)Cite:11
36. Dom R, Baby L.R., **Borse** PH. Enhanced solar photoelectrochemical conversion efficiency of ZnO:Cu electrodes for water-splitting application. International Journal of Photoenergy, 2013, Art. No. 928321. (IF: 1. 27, PCI: 0.423)Cite:19
37. **Borse** PH., Das D. Advance Workshop Report on Evaluation of Hydrogen Producing Technologies for Industry Relevant Application ARCI, Hyderabad, India 8–9 February 2013. Int J Hydrogen Energy 2013;38(11):11470-11471. (IF: 4.1, PCI: 2. 05) Cite: 2
38. Dom R, Siva Kumar G., Hebalkar NY, Joshi S.V., **Borse** PH. Eco-friendly ferrite nano-composite photoelectrode for improved solar hydrogen generation. RSC Advances 2013 ;3(35):15217-15224. (IF: 3.12, PCI: 0.624)Cite:14
39. Pareek A, Dom R, **Borse** PH. Fabrication of large area nanorod like structured CdS photoanode for solar H₂ generation using spray pyrolysis technique. Int J Hydrogen Energy 2013;38(1):36-44. (IF: 4.1, PCI: 1.366) Cite: 23
40. Dom R, Subasri R, Hebalkar NY, Chary AS, **Borse** PH. Synthesis of a hydrogen producing nanocrystalline ZnFe₂O₄ visible light photocatalyst using a rapid microwave irradiation method. RSC Advances 2012;2(33):12782-91. (IF: 3.12, PCI: 0.624)Cite:43

41. Jeong ED, Yu SM, Yoon JH, Bae JS, Hong TE, Cho CR, Lim KT, **Borse** PH, Kim HG. Formation kinetics of crystalline $\text{Ti}_{1-x}\text{Cr}_x\text{O}_2$ photocatalyst from its amorphous powder. Journal of Ceramic Processing Research 2012;13(6):672-6. (IF: 0.39, PCI: 0.04) Cite:0
42. Jeong ED, Yu SM, Yoon JH, Bae JS, Cho CR, Lim KT, **Borse** PH, Kim HG. The co-dopant concentration dependence on visible light photocatalytic efficiency in $\text{SrTi}_{1-x}\text{Fe}_{[x/2]}\text{Cr}_{[x/2]}\text{O}_3$ ($0.01 \leq x \leq 0.2$) perovskite photocatalysts. Journal of Ceramic Processing Research 2012;13(5):517-22. (IF: 0.39, PCI: 0.048) Cite:2
43. **Borse** PH, Cho CR, Yu SM, Yoon JH, Hong TE, Bae JS, Jeong ED, Kim HG. Improved photolysis of water from ti incorporated double perovskite $\text{Sr}_2\text{FeNbO}_6$ lattice. Bulletin of the Korean Chemical Society 2012;33(10):3407-12. (IF: 0.602, PCI: 0.075) Cite:4
44. Dom R, **Borse** PH, Cho CR, Lee JS, Yu SM, Yoon JH, Hong TE, Jeong ED, Kim HG. Synthesis of $\text{SrFe}_{12}\text{O}_{19}$ and $\text{Sr}_7\text{Fe}_{10}\text{O}_{22}$ systems for visible light photocatalytic studies. Journal of Ceramic Processing Research 2012;13(4):451-6. (IF: 0.39, PCI: 0.044) Cite:12
45. Jeong ED, Yu SM, Yoon JY, Bae JS, Cho CR, Lim KT, Dom R, **Borse** PH, Kim HG. Efficient visible light photocatalysis in cubic $\text{Sr}_2\text{FeNbO}_6$. Journal of Ceramic Processing Research 2012;13(3):305-9. (IF: 0.39, PCI: 0.039) Cite:6
46. **Borse** PH, Kim JY, Lee JS, Lim KT, Jeong ED, Bae JS, Yoon J-, Yu SM, Kim HG. Ti-dopant-enhanced photocatalytic activity of a $\text{CaFe}_2\text{O}_4/\text{MgFe}_2\text{O}_4$ bulk heterojunction under visible-light irradiation. Journal of the Korean Physical Society 2012;61(1):73-9. (IF: 0.42, PCI: 0.046) Cite:5
47. **Borse** PH. Photocatalytic and photoelectro-chemical investigations of Fe/ Sn/ Nb containing oxides for energy application: Comparative study. Journal of Physics: Conference Series 2012;365(1). (IF*: 0.45, PCI: 0.45) Cite:0
48. **Borse** PH, Cho CR, Lim KT, Hong TE, Jeong ED, Yoon JH, Yu SM, Kim HG. Comparison of Zn_2TiO_4 and rutile TiO_2 photocatalysts for H_2 production under UV and near-visible light irradiation. Journal of Ceramic Processing Research 2012;13(1):42-6. (IF: 0.39, PCI: 0.048) Cite:12
49. Dom R, Sivakumar G, Hebalkar NY, Joshi SV, **Borse** PH. Deposition of nanostructured photocatalytic zinc ferrite films using solution precursor plasma spraying. Mater Res Bull 2012;47(3):562-70. (IF: 2.87, PCI: 0.575) Cite:18
50. **Borse** PH, Cho CR, Lim KT, Bae JS, Jeong ED, Hong TE, Kim HJ, Kim HG. Effect of co-dopant ratio (Cr/Fe) on visible light photocatalytic activity of Cr-Fe co-doped TiO_2 nanoparticles. Journal of Ceramic Processing Research 2011;12(5):592-8. (IF: 0.39, PCI: 0.048) Cite:3
51. Jeong ED, Jin JS, Kim HJ, Hong TE, Cho CR, Lim KT, Kim HG, **Borse** PH. Metal-ion dependent band energetics in $\text{SrM}_{0.5}\text{Ti}_{0.5}\text{O}_3$ (M = ru, rh, ir, pt, pd) like structures for solar applications. Journal of Ceramic Processing Research 2011;12(6):712-5. (IF: 0.39, PCI: 0.048) Cite:0

52. **Borse** PH, Jang JS, Lee JS, Khan FN, Ha MG, Kim JP, Bae JS, Jeong ED, Kim HG. Enhanced photocatalytic properties due to electron-rich ti-ion doping in ZnFe₂O₄ under visible light irradiation. Journal of the Korean Physical Society 2011;59(4):2750-5.
(IF: 0.42, PCI: 0.046) Cite:5
53. **Borse** PH, Cho CR, Lim KT, Lee YJ, Bae JS, Jeong ED, Kim HG. Ratio dependence of the visible light photocatalytic efficiency for Zn₂Ti_{0.9}Cr_yFe_[0.1-y]O₄: Cr/Fe (0.02 < y < 0.08) photocatalyst synthesized by using a solid state reaction method. Journal of the Korean Physical Society 2011;59(1):65-70.
(IF: 0.42, PCI: 0.06) Cite:7
54. **Borse** PH, Cho CR, Lim KT, Lee YJ, Hong TE, Bae JS, Jeong ED, Kim HJ, Kim HG. Synthesis of barium ferrite for visible light photocatalysis applications. Journal of the Korean Physical Society 2011;58(6):1672-6.
(IF: 0.42, PCI: 0.046) Cite:15
55. Kim HG, **Borse** PH, Jang JS, Ahn CW, Jeong ED, Lee JS. Engineered nanorod perovskite film photocatalysts to harvest visible light. Adv Mater 2011;23(18):2088-92.
(IF: 19.791, PCI:3.298) Cite:53
56. Dom R, Subasri R, Radha K, **Borse** PH. Synthesis of solar active nanocrystalline ferrite, MFe₂O₄ (M: Ca, zn, mg) photocatalyst by microwave irradiation. Solid State Commun 2011;151(6):470-3.
(IF: 1.458, PCI:0.3645) Cite:109
57. Jang JS, **Borse** PH, Lee JS, Lim KT, Jung O-, Jeong ED, Bae JS, Kim HG. Photocatalytic hydrogen production in water-methanol mixture over iron-doped CaTiO₃. Bulletin of the Korean Chemical Society 2011;32(1):95-9.
(IF: 0.602, PCI: 0.075) Cite:25
58. Jang JS, **Borse** PH, Lee JS, Lim KT, Cho CR, Jeong ED, Ha MG, Won MS, Kim HG. Photocatalytic performance of nanocrystalline Bi₅Ti₃FeO₁₅ layered perovskite under visible light. Journal of Nanoscience and Nanotechnology 2010;10(8):5008-14.
(IF: 1.6, PCI: 0.178) Cite:6
59. Jang JS, Lee JS, **Borse** PH, Lim KT, Jung O-, Jeong ED, Won MS, Kim HG. Platinum nanoparticle co-catalyst-induced improved photoelectrical properties in a chromium-doped SrTiO₃ photocatalyst. Journal of the Korean Physical Society 2009;55(6):2470-5.
(IF: 0.42, PCI: 0.0525) Cite:8
60. Jang JS, **Borse** PH, Lee JS, Lim KT, Jung O-, Jeong ED, Bae JS, Won MS, Kim HG. Energy band structure and photocatalytic property of Fe-doped Zn₂TiO₄ material. Bulletin of the Korean Chemical Society 2009;30(12):3021-4.
(IF: 0.602, PCI: 0.0668) Cite:24
61. **Borse** PH, Yoon SS, Jang JS, Lee JS, Hong TE, Jeong ED, Won MS, Jung O-, Shim YB, Kim HG. Formation of layered Bi₅Ti₃FeO₁₅ perovskite in Bi₂O₃-TiO₂-Fe₂O₃ containing system. Bulletin of the Korean Chemical Society 2009;30(12):3011-5. (IF: 0.602, PCI: 0.060) Cite:2
62. Jang JS, Yoon SS, **Borse** PH, Lim KT, Hong TE, Jeong ED, Jung O-, Shim YB, Kim HG. Synthesis and characterization of aurivillius phase Bi₅Ti₃FeO₁₅ layered perovskite for visible light photocatalysis. J Ceram Soc Jpn 2009;117(1371):1268-72.
(IF: 0.828, PCI: 0.092) Cite:22

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64. **Borse** PH, Jang JS, Hong SJ, Lee JS, Jung JH, Hong TE, Ahn CW, Jeong ED, Hong KS, Yoon JH, Kim HG. Photocatalytic hydrogen generation from water-methanol mixtures using nanocrystalline ZnFe_2O_4 under visible light irradiation. *Journal of the Korean Physical Society* 2009;55(4):1472-7. (IF: 0.42, PCI: 0.060) Cite:34
65. Jang JS, **Borse** PH, Lee JS, Jung O-, Cho C-, Jeong ED, Ha MG, Won MS, Kim HG. Synthesis of nanocrystalline ZnFe_2O_4 by polymerized complex method for its visible light photocatalytic application: An efficient photo-oxidant. *Bulletin of the Korean Chemical Society* 2009;30(8):1738-42. (IF: 0.602, PCI: 0.0668) Cite:28
66. Jeong ED, **Borse** PH, Jang JS, Lee JS, Cho CR, Bae JS, Park S, Jung O-, Ryu SM, Won MS, Kim HG. Physical and optical properties of nanocrystalline calcium ferrite synthesized by the polymerized complex method. *Journal of Nanoscience and Nanotechnology* 2009;9(6):3568-73. (IF: 1.6, PCI: 0.145) Cite:5
67. Hong SJ, Jun H, **Borse** PH, Lee JS. Size effects of WO_3 nanocrystals for photooxidation of water in particulate suspension and photoelectrochemical film systems. *Int J Hydrogen Energy* 2009;34(8):3234-42. (IF: 4.1, PCI:0.82) Cite: 190
68. Jang JS, Hong SJ, Lee JS, **Borse** PH, Jung O-, Hong TE, Jeong ED, Won MS, Kim HG. Synthesis of zinc ferrite and its photocatalytic application under visible light. *Journal of the Korean Physical Society* 2009;54(1):204-8. (IF: 0.42, PCI: 0.0668) Cite:50
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