

Curriculum Vitae

Personal Information



Doty Dewi Risanti



Department of Engineering Physics, Faculty of Industrial Technology and Systems Engineering, Institut Teknologi Sepuluh Nopember, ITS Campus, Keputih, Sukolilo, Surabaya 60111, Indonesia



+62-87-857637847



risanti@ep.its.ac.id or d.d.risanti@gmail.com

Sex : Female **Date of Birth** : 1974/09/03 **Nationality** : Indonesia

Occupation : Lecturer at Institut Teknologi Sepuluh Nopember (ITS),

Indonesia  **H index** : 11  **ORCID ID**: 0000-0003-0187-2006

Research Interest: Advanced Materials and Functionalization, Nanomaterials for Energy, Materials Characterization

Education

- | | |
|-----------|---|
| 2002-2011 | Doktorin der Ingenieurwissenschaften (Dr.-Ing) in Metallkunde und Materialphysik, RWTH Aachen, Germany (Magna Cumlaude)
Promotor: Prof. Dr.rer.nat. Gerhard Sauthoff
Co-Promotor: Prof. Dr.H-C. Dr.rer.nat. Günter Gottstein |
| 1997-2000 | Master of Engineering (M.T) in Physical Metallurgy Institut Teknologi Bandung, Bandung, Indonesia (Cumlaude)
Advisor: Prof.Dr. Ir. Syoni Supriyanto, MSc
Co-Advisor: Prof. Ir. Waspodo Martojo |
| 1992-1996 | Bachelor of Engineering (S.T) in Engineering Physics Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia
Advisor: Ir. Agung Budiono, M.Eng |

Publications

1. **D.D. Risanti**, G. Sauthoff. *Strengthening of hot corrosion-resistant Fe-Al alloys through Laves phase precipitation*. EUROMAT 2003 8th European Congress on Advanced Materials and Processes, Lausanne, Switzerland
2. **D.D. Risanti**, G. Sauthoff. *Entwicklung ferritischer Eisen-Aluminium-Tantal Legierungen mit verstärkender Laves-Phase für Anwendungen bei hohen Temperaturen*. Werkstoffwoche 2004, Munich, Germany
3. M. Palm, **D.D. Risanti**, C. Stallybrass, F. Stein. G. Sauthoff. *Strengthening of Corrosion Resistant Fe-Al Alloys Through Intermetallic Precipitates*. Discussion Meeting on the Development of Innovative Iron Aluminum Alloys, Dusseldorf 2004 Germany
4. **D.D. Risanti**, G. Sauthoff. *Strengthening of iron aluminide alloys by atomic ordering and Laves phase precipitation for high-temperature applications*. Intermetallics 13 (12) 2005 pp. 1313-1321.
5. **D. Risanti**, J. Deges, L. Falat. S. Kobayashi, J. Konrad, M. Palm, B. Pöter, A. Schneider, C. Stallybrass, F. Stein. *Dependence of the brittle-to-ductile transition temperature (BDTT) on the Al content of Fe-Al alloys*. Intermetallics 13 (12) 2005 pp. 1337-1342
6. **D.D. Risanti**, G. Sauthoff. *Iron-aluminium-base alloys with strengthening Laves phase for structural applications at high temperatures*. Mater. Sci. Forum. 475 2005 pp. 856-868
7. M. Palm. R. Krein. S. Milenkovic, G. Sauthoff, **D. Risanti**, C. Stallybrass, A. Schneider. *Strengthening mechanisms for Fe-Al-based alloys with increased creep resistance at high temperatures*. MRS Online Proceedings Library 980, 2006 pp.1-12

Curriculum Vitae

8. **D.D. Risanti**, P.E.J. Rivera-Diaz-del-Castillo, S. Van der Zwaag *Strength-toughness optimisation scenarios through interrupted ageing in AA6061 and AA2024*. TMS Annual Meeting: Aluminum Alloys Fabrication, Characterization and Applications 2008 New Orleans, USA
9. A.G. Miroux, A. Bahrami, **D.D. Risanti**, P.E.J. Rivera-Diaz-del-Castillo, L.A.I Kestens. *On the mechanisms of temperature-dependent precipitation in Al-Mg-Si alloys during multi-step ageing*. International Conference of Aluminium Alloys, Aachen Germany 2008, Wiley-VCH Verlag pp. 975-980
10. **D.D. Risanti**, P.E.J. Rivera-Diaz-del-Castillo, A. Bahrami, A.G. Miroux, S. Van der Zwaag. *Strength, deformation, and fracture: A systematic study of the effect of interrupted ageing conditions on the strength and toughness development of AA6061*. International Conference of Aluminium Alloys, Aachen Germany 2008, Wiley-VCH Verlag pp. 1457-1463
11. **D.D. Risanti**, P.E.J. Rivera-Diaz-del-Castillo, S. Van der Zwaag. *Resolving Microstructural Changes during Ageing and Interrupted Ageing Using Thermoelectric Power*. International Conference of Aluminium Alloys, Aachen Germany 2008, Wiley-VCH Verlag pp. 763-769
12. R.R. Thorat, **D.D. Risanti**, D. San Martin, G. Garces, P.E.J. Rivera-Diaz-del-Castillo, S. Van der Zwaag. *On the transformation behaviour of NiTi particulate reinforced AA2124 composites*. J. Alloys and Compd. 477 (1-2) 2009 pp. 307-315
13. **D.D. Risanti**, M. Yin, P.E.J. Rivera-Diaz-del-Castillo, S. Van der Zwaag. *A systematic study of the effect of interrupted ageing conditions on the strength and toughness development of AA6061*. Mater. Sci. Eng.: A 523 (1-2) 2009 pp. 99-111
14. D. San Martin, **D.D. Risanti**, G. Garces, P.E.J. Rivera-Diaz-del-Castillo, S. Van der Zwaag. *On the production and properties of novel particulate NiTi_p/AA2124 metal matrix composites*. Mater. Sci. Eng.: A 526 (1-2) 2009 pp. 250-252
15. **D.D. Risanti**. *Development of Ferritic Fe-Al-Ta Alloys with Strengthening Laves Phase for High Temperature Applications*. Shaker Verlag GmbH, Aachen 2010
16. D. San Martin, **D.D. Risanti**, G. Garces, G. Alcala, P.E.J. Rivera-Diaz-del-Castillo, S. Van der Zwaag. *Fabricacion y caracterizacion de un nuevo material compuesto AA2124/NiTi_p*. XI Congreso Nacional de Materiales, Zaragoza, Spain 2010
17. M. Yin, **D.D. Risanti**, J.H. Chen, S. Van der Zwaag. *A TEP Study on the Microstructural Development in AA2024 during Interrupted Ageing*. Adv. Mater. Res. 89, 2010, pp. 669-674
18. **D.D. Risanti**, M. Yin, J.H. Chen, S. Van der Zwaag. *The Mechanical Properties of AA2024 as Function of the Interrupted Ageing Conditions*. Mater. Sci. Forum 638, 2010 pp. 449-454
19. **D.D. Risanti**, G. Sauthoff. *Microstructures and mechanical properties of Fe-Al-Ta alloys with strengthening Laves phase*. Intermetallics 19 (11) 2011 pp. 1727-1736
20. A.N.V Swari, A. Hangga, **D.D. Risanti**. *Simulation of Duplex Heat Treatment Nb₃Sn Compounds in Cu-Nb-Sn Superconducting Multifilamentary Wire*. International Conference on Chemical and Material Engineering 2012, Semarang, Indonesia

Curriculum Vitae

21. A. Hangga, L. J. Mawarani, **D.D. Risanti**. *Simulation of Counter Blow Process of PBL Quartz Bottle Fabrication*. International Conference on Chemical and Material Engineering 2012, Semarang, Indonesia
22. R.A. Wahyuono, **D.D. Risanti**. Selection of Natural Dye Photosensitizer for Quasi-solid State Dye-sensitized Mesoporous TiO₂ Solar Cell (DSC) Fabrication, International Conference on Chemical and Material Engineering 2012, Semarang, Indonesia
23. **D.D. Risanti**, S. Van der Zwaag. *Effect of Low Temperature Aging on Internal Friction of AA2024*. Adv. Mater. Res. 463, 2012, pp. 41-46
24. S. Agustini, R.A. Wahyuono, D. Sawitri, **D.D. Risanti**. *Effects of nano anatase-rutile TiO₂ volume fraction with natural dye containing anthocyanin on the dye sensitized solar cell performance*. AIP Conf. Proc. 1554 (1) 2013 pp. 66-69
25. R.S. Mustopa, A.F. Adzima, M.K. Asy'ari, **D.D. Risanti**. *Physical properties characterization of Porong Sidoarjo mud and its potentials as CO gas adsorbent materials*. AIP Conf. Proc. 1554 (1) 2013 pp. 75-78
26. **D.D. Risanti**, S. Van der Zwaag. *Resolving individual solute levels of AA6061 through multiple sub-ambient temperatures thermoelectric power measurements*. Adv. Mater. Res. 789 2013 pp. 394-397
27. R.A Wahyuono, **D.D. Risanti**. *Quasi-solid state DSSC performance enhancement by bilayer mesoporous TiO₂ structure modification*. Adv. Mater. Res. 789 2013 pp. 93-96
28. R.A. Wahyuono, **D.D. Risanti**, T. Shirotsaki, S. Nagaoka, M. Takafuji, H. Ihara. *Photoelectrochemical performance of DSSC with monodisperse and polydisperse ZnO SPs*. AIP Conf. Proc. 1586 (1) 2014 pp. 78-81
29. K. Aniswatin, **D.D. Risanti**, A.W. Pramono. *Macrotecture study of non-and sintered pure Nb and Nb₃Sn using orientation distribution function*. Adv. Mater. Res. 896 2014 pp. 638-641
30. A. Syukron, R.A. Wahyuono, D. Sawitri, **D.D. Risanti**. *The effect of paste preparation and annealing temperature of ZnO photoelectrode to dye-sensitized solar cells (DSSC) performance*. Adv. Mater. Res. 896 2014 pp. 183-186
31. R. Amelia, D. Sawitri, **D.D. Risanti**. *Co-sensitized natural dyes potentially used to enhance light harvesting capability*. SPIE Proc. 9444 2015 pp.944400
32. R.A. Wahyuono, **D.D. Risanti**. *Modeling and experiment of dye-sensitized solar cell with vertically aligned ZnO nanorods through chemical bath deposition*. SPIE Proc. 9444 2015 pp.94440Q
33. I.E. Putri, H.A. Budiarti, D. Sawitri, **D.D. Risanti**. *On the role of NaCl addition to phase transformation of TiO₂ from TiCl₃*. Adv. Mater. Res. 1112 2015 pp. 313-316
34. R. Mahendra, M. Arianti, D. Sawitri, **D.D. Risanti**. *Synthesis of various ZnO nanotree morphologies through PEG-assisted co-precipitation method*. Adv. Mater. Res. 1112 2015 pp. 66-70
35. M. Iqbal, R. Mahendra, R.A. Wahyuono, D. Sawitri, **D.D. Risanti**. *Evolution of ZnO nanoflower-like structure formation and growth during synthesis and paste preparation*. Adv. Mater. Res. 1123 2015 pp. 219-222
36. I.E. Putri, M.L. Sidik, R.A. Wahyuono, D. Sawitri, **D.D. Risanti**. *Co-sensitization promoted light harvesting capability of dye-sensitized solar*

Curriculum Vitae

- cell (DSSC) using anthocyanin-based dye. *Adv. Mater. Res.* 1123 2015 pp. 325-328
37. H.A. Budiarti, R.N. Puspitasari, A.M. Hatta, **D.D. Risanti**. *Synthesis and characterization of $TiO_2@SiO_2$ and $SiO_2@TiO_2$ core-shell structure using Lapindo mud extract via sol-gel method.* *Procedia Engineering* 170 2017 pp. 65-71
 38. R.N. Puspitasari, H.A. Budiarti, A.M. Hatta, **D.D. Risanti**. *Enhanced dye-sensitized solar cells performance through novel core-shell structure of gold nanoparticles and nano-silica extracted from Lapindo mud vulcano.* *Procedia Engineering* 170 2017 pp. 93-100
 39. D. Rachmat, L.J. Mawarani, **D.D. Risanti**. *Utilization of Cacao pod husk (*Theobroma cacao* L.) as activated carbon and catalyst in biodiesel production process from waste cooking oil.* *IOP conf. Series: Mater. Sci. Eng.* 299 2018 pp. 012093
 40. D. Rachmat, A.D. Agustin, **D.D. Risanti**. *Purification of biodiesel using activated carbon produced from cocoa pod husk.* *E3S Web of Conf.* 42 2018 pp. 01012
 41. T. Andherson, D. Rachmat, **D.D. Risanti**. *Potential use ore chicken egg shells and cacao pod husk as catalyst for biodiesel production.* *AIP Conf. Proc.* 1945 (1) 2018 pp. 020058
 42. N. Fadhilah, E.R.J. Alhadi, **D.D. Risanti**. *Towards better light harvesting capability for DSSC (dye sensitized solar cells) through addition of $Au@SiO_2$ core-shell nanoparticles.* *AIP Conf. Proc.* 1945 (1) 2018 pp. 020029
 43. I. Paramudita, N. Fadhilah, **D.D. Risanti**. *Gold nanoparticles and silicate microsheet modified photoanode for dye sensitized solar cells.* *Mater. Sci. Forum* 936 2018 pp. 77-81
 44. N. Fadhilah, D.Y. Pratama, D. Sawitri, **D.D. Risanti**. *Preparation of $Au@TiO_2@SiO_2$ core-shell nanostructure and their light harvesting capability on DSSC (dye sensitized solar cells)* *AIP Conf. Proc.* 2088 (1) 2019 pp. 060007
 45. A. Suharto, **D.D. Risanti**, S. Sekartedjo. *On welding gray cast iron using SMAW and GTAW process.* *AIP Conf. Proc.* 2088 (1) 2019 pp. 060002
 46. P. Nurrahmawati, **D.D. Risanti**. *Investigation on optical properties of SiO_2 extracted from Sidoarjo mud with $\gamma-Al_2O_3$ nanoparticle addition for DSSC (dye-sensitized solar cells) applications.* *AIP Conf. Proc.* 2088 (1) 2019 pp. 060008
 47. Y.E. Tandiyayu, **D.D. Risanti**, S. Sekartedjo, N.H. Khaeraningrum. *The temperature variation effect to the AISI 316L corrosion rate of the rotary dryer off-gas line in the nickel smelting plant.* *AIP Conf. Proc.* 2088 (1) 2019 pp. 060006
 48. D. Rachmat, **D.D. Risanti**. *Study on the structural evolution of SiO_2 extracted from Sidoarjo mud.* *IOP Conf. Series: Mater. Sci. and Eng.* 588 (1) 2019 pp. 012032
 49. L. Ernawati, R.A. Wahyuono, H. Widiyandari, **D.D. Risanti**, A.W. Yusariarta, V. Sitompul. *Experimental data of $CaTiO_3$ photocatalyst for degradation of organic pollutants (Brilliant green dye)–Green synthesis, characterization and kinetic study.* *Data in Brief* 32 2020 pp. 106099
 50. I. Kartika, **D.D. Risanti**, H.R.P. Laksana, F.P. Lestari, F. Rokhmanto, A. Erryani. *Fabrication of porous Mg–Ca–Zn alloy by high energy milling for bone implants.* *Proceedings of the 1st International Conference on*

Curriculum Vitae

- Electronics, Biomedical Engineering, and Health Informatics: ICEBEHI 2020, 8-9 October, Surabaya, Indonesia, Lecture Notes in Electrical Engineering 746 2021 pp. 711-722
51. D. Rachmat, I. Paramudita, N. Fadhilah, M.H. Haekal, R.A. Wahyuono, R. Hidayat, R. Zakaria, V. Suendo, **D.D. Risanti**. *Au-doped mesoporous SiO₂ scattering layer enhances light harvesting in quasi Solid-State dye-sensitized solar cells*. J. King Saud Univ. Eng. Sci. 2021
 52. **D.D. Risanti**, I. Kartika, W. Andnindyara, H.R.P. Laksana, F.P. Lestari, J. Triwardono. *Electrochemical behavior in simulated body fluid of Mg-Ca-Zn-TiH₂ alloy pre-treatment prepared by mechanical milling*. AIP Conf. Proc. 2382 (1) 2021 pp. 030002
 53. L.J. Mawarani, T.A. Sihombing, **D.D. Risanti**, M.I. Massadeh, D. Prananto. *Utilization of Chicken Eggshells as Catalyst in Biodiesel Synthesis from Waste Cooking Oil*. Proc. Pakistan Acad. Sci: A Phys. and Compt. Sci. 58 (S) 2021 pp. 85-95
 54. M.H. Haekal, **D.D. Risanti**. *Electron transport investigation of Au-Silica microsheet photoanode on dye-sensitized solar cell*. AIP Conf. Proc. 2580 (1) 2023 pp. 050022
 55. L.J. Mawarani R. Puspitasari, **D.D. Risanti**, L.A. Shah. *The Effect of Mangosteen Varieties as Dyes and ZnO Nanostructures Mixture to DSSC - Dye-sensitized Solar Cell Characteristics*. E3S Web of Conf. 374 (1) 2023 pp. 00022
 56. F.R. Maulana, N. Fadhilah, R.A. Wahyuono, **D.D. Risanti**. *Hydrogen production from waste aluminum foil AA1235 using the aluminum-water reaction method with thickness variations*. Adv. Mater. Res. 1175 2023 pp. 9-15
 57. R.A. Wahyuono, M.M. Julian, S. Suyanto, D.Y. Pratama, **D.D. Risanti**, S. Syaharussajali, R. Lestari, F.D. Alfarisyi, Z. Zanjabila. *Solar resources potential mapping and implementation in Indramayu, West Java, Indonesia using climate data-derived and GIS-based information*. AIP Conf. Proc. 2604 (1) 2023 pp. 060004
 58. S. Pakpahan, **D.D. Risanti**. *Fabrication and characterization of Cu₂O/TiO₂ thin film heterojunction with chemical bath deposition*. AIP Conf. Proc. 2580 (1) 2023 pp. 050010
 59. **D.D. Risanti**, Y.R. Donna, I.H. Sahputra. *Temperature Effect on Sulphur Adsorption on Iron Surface: A Molecular Dynamics Simulations Study*. Int. Jour. Comp. Mater. Sci. Eng., **Accepted Paper**

Experiences/Awards

2002-2005	Research assistant at Max Planck Institute for Iron Research Düsseldorf Germany funded by DFG (Deutsches Forschung Gemeinschaft)
2006-2009	Postdoctoral research at M2i Materials for Innovation Institute Delft the Netherland funded by industrial partners and TU Delft
2007	Workshop on Electron Microscopy and Focused Ion Beam at KU Leuven Belgium
2007	Aluminum Summer School at NTNU Trondheim Norway
2013	Best Oral Presentation at Quality in Research University of Indonesia
2014	Best Oral Presentation at International Seminar on Photonics and its Applications
2022	Invited speaker at International Conference on Materials and Metallurgical Technology

Curriculum Vitae

Research Grants

2012-2013	National competitive research: Strategis Nasional
2013-2014	National desentralisation research: Penelitian Unggulan
2015-2016	National desentralisation research :Penelitian Unggulan
2017-2018	National desentralisation research :Penelitian Unggulan
2020	National desentralisation research: Penelitian Unggulan
2021	University scientific research
2022	Intra-university collaboration research (Pakerti), University scientific research, national competitive master research. National desentralisation research: Penelitian Unggulan
2023-2024	International university collaboration research and national competitive graduate research