Publication List Nele Moelans

December 24, 2018

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Publications in international journals with S.C.I. impactfactor


*Also selected for the July 15, 2008 issue of Virtual Journal of Biological Physics Research (http://www.vjbio.org).*
9. N. Moelans, B. Blanpain, P. Wollants, Quantitative analysis of grain boundary properties in a
generalized phase field model for grain growth in anisotropic systems, *Phys. Rev. B*, 78 (2), n
024113 (2008).
   Also selected for the August 1, 2008 issue of Virtual Journal of Biological Physics Research
   (http://www.vjbio.org).
11. Y. Eichhammer, J. Roeck, N. Moelans, F. Iacopi, B. Blanpain, M. Heyns, Calculation of the
12. N. Moelans, F. Wendler, B. Nestler, Comparative study of two phase-field models for multi-
14. J. Heulens and N. Moelans. On the rotation invariance of multi-order parameter models for
15. L. Vanherpe, N. Moelans, B. Blanpain, S. Vandewalle. Pinning effect of spheroid second-phase
particles on grain growth studied by three-dimensional phase field simulations. *Comp. Mater.
16. N. Moelans, G. Samaey. Editorial special issue on Multiscale Modeling of Moving Interfaces
17. N. Moelans. A quantitative and thermodynamically consistent phase-field interpolation func-
18. J. Heulens, B. Blanpain, N. Moelans. A phase-field model for isothermal crystallization for
19. Y. Eichhammer, M. Heyns, N. Moelans. Calculation of phase equilibria for an alloy nanoparti-
cle in contact with a solid nanowire. *CALPHAD – Computer Coupling of Phase Diagrams and
20. L. Vanherpe, N. Moelans, B. Blanpain, S. Vandewalle. Bounding box framework for efficient
   phase field simulation of grain growth in anisotropic systems. *Comp. Mater. Sci.*, 50, 2221-
2231, 2011.
22. J. Heulens, B. Blanpain, N. Moelans. Analysis of the isothermal crystallization of CaSiO3-
23. J. Heulens, B. Blanpain, N. Moelans. Phase field modeling of the crystallization of FeOx-SiO2
   melts in contact with an oxygen-containing atmosphere. *Chemical Geology*, 290, 156-162,
2011.


Contributions to books and compendiums


Scientific editor


Publications in journals without S.C.I. impact factor – Conference proceedings


**Oral presentations**

*Invited*


*The presenter is indicated in bold*


29. Nele Moelans. Phase field modeling of coarsening of multi-phase and multi-component microstructures: some recent advances. Hero-m seminar, KTH, October 18, 2018


*Contributed


35. **A. Durga.** P. Wollants, N. Moelans, Phase-field study of elastic effects on the growth of intermetallic precipitates in Cu-Sn lead-free solder system. Euromat 2011, 12-15 September 2011,
Montpellier, France. Symposium: D34 - Thermodynamics and phase equilibria; Modeling of phase diagrams.


37. **V. Yadav**, N. Moelans. Application of phase field crystal modeling to studying coupled grain boundary migration and grain rotation. MS&T 2011, Greater Columbus Convention Center, Columbus, Ohio, October, 16-20, 2011.


46. **Andrea Gil Santos**, Nele Moelans, Norbert Hort, Omer Van der Biest. Correlation between the mechanical behaviour with the microstructure in the Mg-Ca-Si-Sr system for degradable biomaterials based on thermodynamic calculations. 2015 TMS Annual Meeting & Exhibition, Symposium: Magnesium Technology, Florida 2015.

47. **A. Gil-Santos**, I. Marco, G. Szakacs, N. Moelans, N. Hort, O. Van der Biest. Effect of composition on microstructure and properties of Mg-Si-Sr alloys for resorbable material applications. 7th Symposium on Biodegradable Metals in Carovigno, Italy. August, 2015. (Poster and Oral Communication)


### Poster presentations

*Awarded*


   *Ph. D. poster award: honorable mentioning for frontier research*


\(^{[1]}\) The presenter is indicated in bold
*Full list*

1. **N. Moelans, K.C. Hari Kumar, P. Wollants.** Bi-In-Sn-Zn system for lead-free soldering. CALPHAD XXXII, La Malbaie, Quebec, Canada, May 25-30, 2003.


   *Ph. D. poster award: honorable mentioning for frontier research*


**Dissertations**


**Internal Reports**


**Promoter of completed PhD dissertations**


8. Andrea Isabel Gil Santos. Phase diagram assessment and alloy characterization of ternary Mg rich Mg-Si-Ca and Mg-Si-Sr alloys for biomedical applications. May 9, 2017.

