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Research Interests:
1. Bifurcation of dendritic growth with non-symmetric condition
2. Interface capture by phase-field model with large non-linear effect.

Education
(1) Ph.D in Department of Chemical Engineering, National Taiwan University, 2010.
- Thesis Topic: Three dimensional adaptive phase field modeling of dendritic growth
- Advisor: Professor Chung-Wen Lan
- Area of Study: Phase field model, dendritic growth
(2) B.S in Department of Chemical Engineering, National Taiwan University of Science and Technology, 2003.

Publication List
[1]Journal Publication:
1. **C.C. Chen** and C.W. Lan[*], Efficient adaptive three-dimensional phase field simulation of dendritic crystal growth at various supercooling using rescaling, *Journal of Crystal Growth* **311**, 702-706 (2009)
2. **C.C. Chen**, Y.L. Tsai and C.W. Lan[*], Adaptive phase field simulation of dendritic growth in a forced flow: 2D vs3D morphologies, *International Journal of Heat Mass Transfer* **52**,1158-1166 (2009)
3. **C.C. Chen** and C.W. Lan[*], Efficient adaptive three-dimensional phase field simulation of free dendritic growth under natural convection, *Journal of Crystal Growth* **312**,1437-1442 (2010)
4. Y.L. Tsai, **C.C. Chen**, C.W. Lan[*], Three-dimensional adaptive phase field modeling of directional solidification of a binary alloy: 2D-3D transitions, *International Journal of Heat Mass Transfer* **53**, 2272-2283 (2010)
5. H.K. Lin, **C.C. Chen**, C.W. Lan[*], Adaptive three-dimensional phase-field

modeling of dendritic crystal growth with high anisotropy, *Journal of Crystal Growth* **318**, 51-54 (2011)

6. S.Y. Yeh, **C.C. Chen**, C.W. Lan[*], Adaptive phase field modeling of grain boundary diffusion, *Journal of Crystal Growth* **318**, 46-50 (2011)

7. S.Y. Yeh, **C.C. Chen**, C.W. Lan[*], Phase field modeling of morphological instability near grain boundary during directional solidification of a binary alloy: The hump formation, *Journal of Crystal Growth* **324**, 296-303 (2011)

8. S.H. Liu, **C.C. Chen**, C.W. Lan[*], Phase field modeling with nonlinear kinetics, *Journal of Crystal Growth*, in press

9. H.K. Lin, **C.C. Chen**, C.W. Lan[*], A simple interfacial energy function for phase field simulation of solidification with high anisotropy, *Journal of Crystal Growth*, in press

[2]Conference Publications:

2005 Symposium on Transport Phenomena and Applications - Three-dimensional Adaptive Phase Field Simulation of Dendritic Growth in a Convective Flow, Y. C. Chang (陳昶志), C. W. Lan (藍崇文)[*]

2006 Symposium on Transport Phenomena and Applications - 強制對流在三維下對樹枝狀晶體生長的影響, Y. C. Chang (陳昶志), C. W. Lan (藍崇文)[*]

2007 Symposium on Transport Phenomena and Applications - The three dimensional dendritic growth in forced convection and natural convection C.C. Chen (陳昶志),C.W. Lan (藍崇文)[*], Y.L. Tsai(蔡亞陸)

2008 Symposium on Transport Phenomena and Applications - Simulation of the similarity of dendritic crystal growth at various supercooling and the effect of forced convection, C.C. Chen (陳昶志), C.W. Lan (藍崇文)[*]

2011 化工年會-Phase Field Modeling of Nonlinear and Anisotropic Kinetics for Facet Growth, C.C. Chen(陳昶志) , S.H. Liu(劉思翰) , C.W. Lan(藍崇文)*