A virtual reactor for simulation of plasma enhanced chemical vapor deposition

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Chapter 10. Publications*

1. V.V. Korkhov, V.V. Krzhizhanovskaya, J.T. Moscicki. Dynamic Workload Balancing of Parallel Applications with User-Level Scheduling on the Grid. Accepted for publication in the Future Generation Computer Systems. 2008

2. V.V. Korkhov, J.T. Moscicki and V.V. Krzhizhanovskaya. User-Level Scheduling of Divisible Load Parallel Applications with Resource Selection and Adaptive Workload Balancing on the Grid. Accepted for publication in the IEEE Systems Journal, Special Issue on Grid Resource Management. 2008

3. J.K. Rath, A. Verkerk, M. Brinza, R.E.I. Schropp, W.J. Goedheer, V.V. Krzhizhanovskaya, Y.E. Gorbachev, K.E. Orlov, E.M. Khilkevitch, A.S. Smirnov. Gas phase considerations for the deposition of thin film silicon cells by VHF-PECVD at low substrate temperatures. Accepted at the 33rd IEEE PVSEC.

4. A. Verkerk, J.K. Rath, M. Brinza, R.E.I. Schropp, W.J. Goedheer, V.V. Krzhizhanovskaya, Y.E. Gorbachev, K.E. Orlov, E.M. Khilkevitch, A.S. Smirnov. Compensation of decreased ion energy by increased hydrogen dilution in plasma deposition of thin film silicon solar cells at low substrate temperatures. Accepted at the Symposium K of the EMRS spring meeting.


9. V.V. Krzhizhanovskaya, Y.E. Gorbachev, M.A. Zatevakhin and P.M.A. Sloat, "Virtual Reactor* – Computational Environment for Multidimensional Simulation of Plasma

* Listed in reverse chronological order
Chemical Processing, Proceedings of the XV International Conference on
Computational Mechanics and Modern Applied Software Systems (CMMASS-2007),
25-31 May 2007, Alushta, Ukraine, Pbl.: MAI

10. V.V. Krzhizhanovskaya and S. Sun. Simulation of Multiphysics Multiscale Systems:
Introduction to the ICCS-2007 Workshop. Proceedings of the 7th International
Conference on Computational Science (ICCS-2007), Beijing, China, May 27-30, 2007,
Heidelberg 2007. ISBN 978-3-540-72583-1. DOI: http://dx.doi.org/10.1007/978-3-540-72584-8_100

11. V.V. Krzhizhanovskaya and V.V. Korkhov. Dynamic Load Balancing of Black-Box
Applications with a Resource Selection Mechanism on Heterogeneous Resources of
the Grid. Proceedings of the Ninth International Conference on Parallel Computing
Technologies (PaCT-2007), Pereslavl-Zalessky, Russia, September 3-7, 2007, in
Heidelberg 2007. 0302-9743 (Print) 1611-3349 (Online).
http://www.springerlink.com/content/b070j64r30916320/DOI: 10.1007/978-3-540-73940-1

12. V.V. Krzhizhanovskaya. Software Environment for Simulation of Plasma-Chemical
Deposition Reactors on Heterogeneous Computational Resources of the Grid.
Proceedings of the conference on Computer Technologies in Modern Researches,
Polytechnic Symposium "Young Scientists to the industry of Northwest Russia".
December 2006. Publ: St. Petersburg State Polytechnic University 2006, pp. 81-82.
ISBN 5-7422-1365-4. Best presentation award.

13. V.V. Krzhizhanovskaya, V.V. Korkhov, A. Tirado-Ramos, D.J. Groen, I.V.
Shoshmina, I.A. Valuev, I.V. Morozov, N.V. Malyshkin, Y.E. Gorbachev, P.M.A.
Sloot. Computational Engineering on the Grid: Crafting a Distributed Virtual Reactor.
Second IEEE International Conference on e-Science and Grid Computing (e-
http://doi.ieeecomputersociety.org/10.1109/E-SCIENCE.2006.42 (full paper on CD)

14. М.В. Богданов, Ю.Е. Горбачев, В.В. Кржниновская, А.В. Кулки, М.Б. Рами,
Д.Х. Офенгейт, Д.Е. Тараканов, А.В. Цырольников. "Процессы теплово-
и массообмена в технологии современных полупроводниковых материалов".
Методическое пособие по выполнению вычислительных лабораторных работ. С.-
Петербург. 2006 (68 с.)

15. V.V. Krzhizhanovskaya, B. Chopard, Y.E. Gorbachev (Eds.) Simulation of
Multiphysics Multiscale Systems. Special Issue of International Journal for Multiscale
Computational Engineering. V. 4, Issue 3, 2006. Guest editorship. DOI:
10.1615/IntJMultCompEng.v4.i3.10. ISSN 1543-1649

16. V.V. Korkhov, V.V. Krzhizhanovskaya. Workload Balancing in Heterogeneous Grid
Conference "Distributed Computing and Grid Technologies in Science and Education".
17. V.V. Krzhizhanovskaya and V.V. Korkhov. Problem-Solving Environments for Simulation and Optimization on Heterogeneous Distributed Computational Resources of the Grid. Proceedings of the Third International Conference on Parallel Computations and Control Problems PACO ’2006, Moscow, Russia, October 2-4, 2006. Publ: Moscow, V.A. Trapeznikov Institute of Control Sciences RAS, 2006. pp. 917-932. ISBN 5-201-14990-1.

18. V.V. Krzhizhanovskaya, V.V. Korkhov, P.M.A. Sloot. Virtual Reactor: a distributed computing environment for simulation of plasma chemical processes on heterogeneous resources of the Grid. All-Russian conference "Scientific services on the Internet: Parallel Programming Technologies". Novorossiysk, Russia, 18-23 September 2006

19. Y.E. Gorbachev, A.I. Zhmakin, M.A. Zatevakhin, V.V. Krzhizhanovskaya, M.V. Bogdanov, A.V. Kulik, D.H. Ofengeim, M.S. Ramm. From Electronic Textbooks to Virtual Laboratories. Telecommunications and Informatization in Education, N 5 (36), 2006. Publ: SGU, Moscow (in Russian)


25. V.V. Krzhizhanovskaya, P.M.A. Sloot and Y.E. Gorbachev. Grid-based Simulation of Industrial Thin-Film Production. Simulation: Transactions of the Society for Modeling and Simulation International, Special Issue on Applications of Parallel and Distributed
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27. V.V. Krzhizhanovskaya, Y.E. Gorbachev and P.M.A. Sloop. A Grid-Based Problem-Solving Environment for Simulation of Plasma Enhanced Chemical Vapor Deposition. Book of abstracts of the International Conference "Distributed Computing and Grid Technologies in Science and Education". 29 June – 2 July 2004, Dubna, Russia, Publ: JINR, Dubna, 2004, pp. 89-90. ISBN 5-9530-0052-9

28. Y.E. Gorbachev, M.A. Zatevakhin, Ignatiev A.A., Krzhizhanovskaya. Virtual Laboratory for Research and Education. XI International Conference on High Technologies and Quality of Education and Science, St. Petersburg Polytechnic University. 27-28 February 2004. Publ.: SPbSPU, St. Petersburg, 2004, pp. 59-60


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35. V.V. Krzhizhanovskaya, M.A. Zatevakhin, A.A. Ignatiev, Y.E. Gorbachev, P.M.A. Sloot. Distributed Simulation of Silicon-Based Film Growth. Proceedings of the Fourth International Conference on Parallel Processing and Applied Mathematics (PPAM 2001) Naleczow, Poland, September 9-12, 2001, in series Lecture Notes in Computer Science, Vol. 2328, pp. 879-888. Springer-Verlag 2002. ISBN: 3-540-43792-4 , ISSN: 0302-9743 http://www.springerlink.com/content/erj5rtybb3030pe6/


39. Y.E. Gorbachev, M.A. Zatevakhin, V.V. Krzhizhanovskaya, V.A. Shveigert. Special Features of the Growth of Hydrogenated Amorphous Silicon in PECVD Reactors. Technical Physics, Vol. 45, N 8, pp. 1032-1041. Publ.: MAIK Nauka/Interperiodika 2000. ISSN: 1063-7842

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