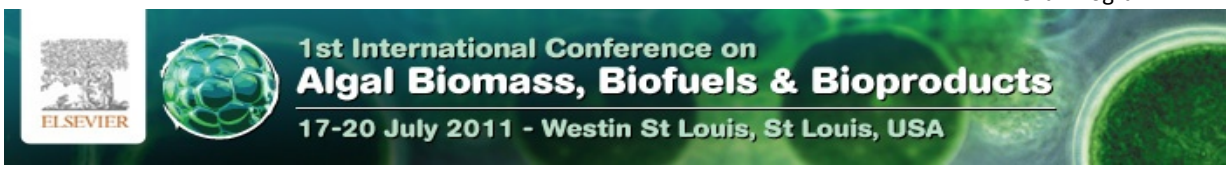

PROGRAM

Sunday 17th July 2011	
4:00 pm	**Registration**
5:00 pm - 6:30 pm	**Welcome Reception**
5:00 pm - 6:30 pm	**Poster Session 1: Algal Biology** *Room: Promenade Ballroom*
Monday 18th July 2011	
8:00 am - 8:10 am	**Welcome and Introduction from the Conference Chairs**
8:10am – 8:30am	**Welcome** United States Congressman Russ Carnahan
8:30 am - 9:20 am	**Plenary lecture 1** *Chair:* J.S.Olivares*; Los Alamos National Laboratory, USA* *Room: Cupples Ballroom* **[Plenary 1] Getting smart about renewable fuels; the emerging opportunities with algae** R.T. Sayre; *Donald Danforth Plant Science Center, USA*
9:20 am - 12:10 pm	**Oral Session 1: Algal Biology - Phylogeny of Microalgae for Biofuels** Chair: M.M. Watanabe; *University of Tsukuba, Japan* *Room: Cupples Ballroom*
9:20 am - 9:50 am	**[K1] Biochemical and physiologicasl manipulation of the alga dunaliella bardawil for production of high value comercial products** A. Ben-Amotz; *Nature Beta Technologies Ltd., Seambiotic Ltd, Israel*
9:50 am – 10:20 am	**[O1] Identification of novel strains of microalgae for biofuels applications** J.E.W. Polle*, *Brooklyn College of CUNY, USA*
10:20 am -10:37 am	**[O2] Screening diverse algal species by de novo transcriptome sequencing and lipidomic analysis** N.D. Clarke*, *Genome Institute of Singapore, Singapore*
10:37 am – 11:00 am	**Coffee Break –** *Promenade Ballroom*
11:00 am – 11:30 am	**[K2] Hydrocarbon-producing algae, botryococcus and aurantiochytrium as alternative sources of fossil oil** M.M. Watanabe*, I. Inouye, K. Kaya et al; *University of Tsukuba, Japan*
11:30 am – 11:47 am	**[O3] Local bioprospecting for high-lipid producing microalgal strains to be grown on concentrated municipal wastewater for biofuel production** W.G. Zhou*, Y.C. Li, M. Min, B. Hu, P. Chen, R. Ruan; *University of Minnesota, USA*
11:47 am – 12:04 pm	**[O4] Molecular phylogenetic identification of microalgal species for biofuel production** F.A. Nalim, M. Seger*, A. Unc; *New Mexico State University, USA*
12:10 pm – 1:30 pm	**Lunch –** *Promenade Ballroom*
1:30 pm – 3:30 pm	**Oral Session 2: Algal Biology - Molecular Traits of Microalgae for Biofuels** Chair: H. Cerutti; *University of Nebraska, USA* *Room: Cupples Ballroom*
1:30 pm – 2:00 pm	**[K3] TAG you're it! RNA Seq analysis of nutrient deprivation in chlamydomonas** S. Merchant*, N. Boyle, S. Karpowicz, D. Casero, S. Cokus, M. Pellegrini et al; *UCLA, USA*
2:00pm – 2:30 pm	**[K4] RNA interference in algae: Biogenesis and function of small RNAs in chlamydomonas reinhardtii** H. Cerutti*, X.R. Ma, J. Msanne, E.J. Kim et al; *University of Nebraska, USA*
2:30 pm – 2:47 pm	**[O5] Stress-induced triacylglycerol (TAG) synthesis in the green alga chlamydomonas reinhardtii** U. Goodenough*[1], R. Roth[1], C. Goodson[1], J. Heuser[1], Z.T. Wang[1], L.M. Aguirre Palma[1] et al; *[1]Washington University, USA, [2]University of Cologne, Germany*
2:47 pm – 3:04 pm	**[O6] Cloning of the partial small subunit gene of ADP-glucose pyrophosphorylase of Dunaliella parva** C.H. Shang, S.H. Zhu, Z.H. Yuan, Z.M. Wang*; *Guangzhou Institute of Energy Conversion, China*

3:04 pm – 3:20 pm	**[O7] Development of chlamydomonas as a microalgal platform for production of biofuels and other renewable bioproducts** M.H. Spalding*, D.J. Stessman, D.A. Wright, L. Wu, A. Yingst, N. Godbout et al; *Iowa State University, USA*
3:20 pm – 4:00 pm	**Coffee Break –** *Promenade Ballroom*
4:40 pm – 5:45 pm	**Oral Session 3: Algal Biology - Metobolic Regulation of Microalgae for Biofuels** Chair: M. Hildebrand; *University of California, USA* *Room: Cupples Ballroom*
4:00pm – 4:30 pm	**[K5] The development of diatoms for biofuels production** M. Hildebrand; *University of California, USA*
4:30 pm – 5:00 pm	**[K6] From water oxidation to starch, oils or hydrogen: pathway engineering in phototrophic microorganisms** M.C. Posewitz*, R. Radakovits, R.E. Jinkerson, J.E. Meuser, V.H. Work, L.G. Elliott, S. D'Adamo et al; *Colorado School of Mines, USA*
5:00 pm – 5:17 pm	**[O8] A chloroplast pathway for the de novo biosynthesis of triacylglycerol in microalgae** J. Fan, C. Andre, C. Xu*; *Brookhaven National Laboratory, USA*
5:17 pm – 5:34 pm	**[O9] Characterization of chlamydomonas lipase candidates involved in triacylglycerol metabolism** X. Li*, E.R. Moellering, B.B. Sears, M.H. Kuo, C. Benning; *Michigan State University, USA*
5:45 pm – 6:45 pm	**Poster Session 2: Algal Cultivation** *Room: Promenade Ballroom*
Tuesday 19th July 2011	
8:00 am - 8:10 am	**Welcome and Introduction**
8:10 am - 9:00 am	**Plenary lecture 2** *Chair: R.T.Sayre; Donald Danforth Plant Science Center, USA* *Room: Cupples Ballroom* **[Plenary 2] Overview of US DOE's algal biofuels efforts** V. Sarisky Reed; *Department of Energy, USA*
9:00 am - 12:00 pm	**Oral Session 4: Algal Cultivation - Phototrophic Systems in Open Ponds** Chair: M.R. Tredici; *Università degli Studi di Firenze, Italy* *Room: Cupples Ballroom*
9:00 am - 9:30 am	**[K7] Microalgae: can they contribute to a more sustainable energy future?** M.R. Tredici; *Università degli Studi di Firenze, Italy*
9:30 am – 10:00 am	**[O10] Raceway ponds and wastewater for low-cost algae production and harvesting** T.J. Lundquist; *California Polytechnic State University, USA*
10:00 am -10:17 am	**[O11] Renewable algal resources and landfill leachate remediation** S.J. Edmundson*, A.C. Wilkie; *University of Florida, USA*
10:17 am – 10:45 am	**Coffee Break –** *Promenade Ballroom*
10:45 am – 11:15 am	**[K8] Genetic engineering, mass cultivation, and bio-fuel conversion of biomass** J.W. Yang[1,2]; [1]*Department of Chemical and Biomolecular Engineering, Republic of Korea,* [2]*Advanced Biomass R&D Center, Republic of Korea*
11:15 am – 11:32 am	**[O12] Metals uptake and speciation in algae grown for biofuel production: Macro to molecular scale** C.A. Dean*[1], E.J. Sullivan[1], S.N. Twary[1], O. Batuk[1], S.M. Webb[2], T.M. Yoshida[1]; [1]*Los Alamos National Laboratory, USA,* [2]*Stanford Synchrotron Radiation Laboratory, USA*
11:32 am – 11:49 am	**[O13] Remote spectroradiometric monitoring of *Nannochloropsis salina* growth** T.A. Reichardt*, O.F. Garcia, A.M. Collins, A. Ruffing, H.D.T. Jones, J.A. Timlin et al; *Sandia National Laboratories, USA*
12:00 – 1:30 pm	**Lunch –** *Promenade Ballroom*
1:30 pm – 3:30 pm	**Oral Session 5: Algal Cultivation - Phototrophic Systems in Photobioreactors** Chair: J.W. Yang[1,2]; [1]*Department of Chemical and Biomolecular Engineering, Republic of Korea,* [2]*Advanced Biomass R&D Center, Republic of Korea* *Room: Cupples Ballroom*
1:30 pm – 2:00 pm	**[O14] Combined photobioreactor lighting and electricity generation** D.J. Dye*, P. Davidson, N. Phillipps, B.D. Wood; *Utah State University, USA*

2:00pm – 2:30 pm	**[O15] Scenedesmus incrassatulus algae growth on different trophic conditions for carotenoid production in photobioreactor** N.A. Urbina, O. Melchy*, R.O. Cañizares Villanueva; *Centro de investigación y de estudios avanzados del IPN, Mexico*
2:30 pm – 2:47 pm	**[O16] Changes in chlorophyll fluorescence parameters in different growth stages of Chlorella sorokiniana** E.R. Mattos*[1], R. Hunt[2], M. Van Iersel[1], M. Cabrera[1], M. Singh[1], K.C. Das[1] *[1]University of Georgia, USA, [2]Intellenergy LLC, USA*
2:47 pm – 3:04 pm	**[O17] Growth measurement and modeling of *Dunaliella salina*** P.E. Gharagozloo; *Sandia National Laboratories, USA*
3:04 pm – 3:20 pm	**[O18] A microfluidic microalgae screening platform for high-throughput biomass/biofuel production analysis** H.S. Kim, T.L. Weiss, T.P. Devarenne, A. Han*; *Texas A&M University, USA*
3:20 pm – 4:00 pm	**Coffee Break –** *Promenade Ballroom*
4:40 pm – 5:45 pm	**Oral Session 6: Algal Cultivation - Heterotrophic Systems** Chair: Q.Y. Wu; *Tsinghua University, China* *Room: Cupples Ballroom*
4:00pm – 4:30 pm	**[K9] Algae bio-fuels: A novel photosynthesis-fermentation approach** Q.Y. Wu; *Tsinghua University, China*
4:30 pm – 4:47 pm	**[O19] Mixotrophic cultivation of the oleaginous alga chlorella vulgaris on industrial co-products** D. Mitra*, B.F. Brehm Stecher, J.H. van Leeuwen, B. Lamsal; *Iowa State University, USA*
4:47 pm – 5:04 pm	**[O20] Two-stage hetero and phototrophic algae culture system** Y. Zheng, Z. Chi, B. Lucker, S.L. Chen*; *Washington State University, USA*
5:04 pm – 5:21 pm	**[O21] Prospects for biodiesel production - algae from boreal humic lakes** P.M. Tikka*, E. Peltomaa, A. Ojala, A. Nykänen, K. Valkonen, M. Romantschuk; *University of Helsinki, Finland*
5:21 pm – 5:38 pm	**[O22] Algal autotrophic and heterotrophic lipid synthesis for biodiesel production** X. Bai, E. Knurek, M. Workman, S. Hamilton, C. Hertz, B. Bernhardt, M. Rangelova, J. Obbard* et al; *Cellana LLC, USA*
5:45 pm – 6:45 pm	**Poster Session 3: Algal Products and Economics** *Room: Promenade Ballroom*
7:00 pm	**Optional Conference Dinner** *Missouri Botanical Gardens*
Wednesday 20th July 2011	
8:00 am - 8:10 am	**Welcome and Introduction**
8:10 am - 9:00 am	**Plenary lecture 3** Chair: A.J. Marchese; *Colorado State University, USA* *Room: Cupples Ballroom* **[Plenary 3] Challenges and Opportunities in the Bioplastics Market** N. Danielson*; DuPont, USA*
9:00 am - 12:00 am	**Oral Session 7: Algal Harvesting and Extraction Systems** Chair: B.L. Marrone; *Los Alamos National Laboratory, USA* *Room: Cupples Ballroom*
9:00 am - 9:30 am	**[K10] Algae harvesting: A research perspective on current challenges and future directions** B.L. Marrone; *Los Alamos National Laboratory, USA*
9:30 am – 10:00 am	**[K11] Next generation algae extraction and fractionation technology** B.L. Goodall*, P. Chandra, T. Czartoski; *SRS Energy, US*
10:00 am -10:17 am	**[O23] Harvesting and processing of microalgae biomass** S. Thomas Hall*, J. Obbard, L. Pickell, R. Dorland; *Cellana LLC, USA*
10:17 am – 10:45 am	**Coffee Break –** *Promenade Ballroom*
10:45 am – 11:02 am	**[O24] A membrane contactor extraction system for recovery of oil from aqueous algal cultures** J.R. Kwiatkowski[1]; *[1]Phycal, Inc., USA, [2]Donald Danforth Plant Science Center, USA*
11:02 am – 11:19 am	**[O25] Low-energy concentration and dewatering of microalgae for fuels, products and remediation** R. Youngs; *Algaeventure Systems, USA*
11:19 am – 11:36 am	**[O26] Sedimentation and flocculation of algae using naturally-available ions** B.T. Smith*, R.H. Davis; *Univ. of Colorado, USA*

11:36 am – 12:03 am	**[O27] Concentrating and rupturing of algae for lipid** C.C. Lin*, C.J. Cheng, P.K. Hong; *University of Utah Salt Lake City, USA*
12:00 – 1:30 pm	**Lunch –** *Promenade Ballroom*
1:30 pm – 3:30 pm	**Oral Session 8: New Conversion Technologies for Algal Biomass** Chair: A.J. Marchese; *Colorado State University, USA* *Room: Cupples Ballroom*
1:30 pm – 2:00 pm	**[K12] Fuel properties and pollutant emissions from algal methyl ester biodiesel** A.J. Marchese; *Colorado State University, USA*
2:00pm – 3:00 pm	**[K13] Algal co-product in ruminant diets** S.L. Ivey; *New Mexico State University, USA*
2:30 pm – 2:47 pm	**[O28] Conversion of algal oils to hydrocarbon fuels** F. Lupton*, N. Kassa, D. Galloway, S. Lynch; *Honeywell Company, USA*
2:47 pm – 3:04 pm	**[O29] Nutrient recycling of aqueous phase for microalgae cultivation from the hydrothermal liquefaction process** P. Biller*[1], A.B. Ross[1], S. Skill[2], C. Llewellyn[2] ; *[1]University of Leeds, UK, [2]Plymouth Marine Laboratories, UK*
3:04 pm – 3:20 pm	**[O30] Evaluating the industrial application of algal polysaccharide isolated as a byproduct of bio oil extraction by a unique multistep hydrothermal technology** M. Chakraborty, C. Miao, S. Chen*; *Washington State University, USA*
3:20 pm – 4:00 pm	**Coffee Break –** *Promenade Ballroom*
4:40 pm – 5:45 pm	**Oral Session 9: Technoeconomic Modeling of Algal Biofuels Systems** Chair: J.W. Richardson; *Texas A&M University, USA* *Room: Cupples Ballroom*
4:00pm – 4:30 pm	**[K14] Economic comparison of open pond raceways to photo bio reactors for profitable production of algae for fuels in the southwest** J.W. Richardson*, B. Fisher, J.L. Outlaw et al; *Texas A&M University, USA*
4:30 pm – 4:47 pm	**[O31] Evaluating the environmental sustainability of algal biomass for biofuel production** P. Blowers*[1], C. Canter[1], D. Shonnard[2], R. Handler[2], C. Young[2] *[1]University of Arizona, USA, [2]Michigan Technological University, USA*
4:47 pm – 5:04 pm	**[O32] Integrated modeling framework for algae logistics systems** D.T. Newby*, D.J. Muth Jr, J.M. Abodeely, D.M. Stevens, A.E. Ray; *Idaho National Laboratory, USA*
5:04 pm – 5:21 pm	**[O33] A technical-economic-LCA model of producing biofuel from algae** M. Henson*, J. Turner, R. Axelbaum, H. Pakrasi; *Washington University in St. Louis, USA*
5:21 pm – 5:38 pm	**[O34] A techno-economic analysis of open pond microalgae biofuels production** J.R. Benemann*[1], I.C. Woertz[1,2], T.J. Lundquist[1,2]; *MicroBio Engineering, Inc., USA, [2]California Polytechnic State University, USA*
5:45 pm	**Closing Remarks**