

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 <i>Room: Promenade Ballroom</i>
Monday 18th July 2011	
8:00 am - 8:10 am	Welcome and Introduction
8:10 am - 9:00 am	Plenary lecture 1 <i>Chair: J.S.Olivares; Los Alamos National Laboratory, USA</i> <i>Room: Cupples Ballroom</i> [Plenary 1] Getting smart about renewable fuels; the emerging opportunities with algae <i>R.T. Sayre; Donald Danforth Plant Science Center, USA</i>
9:00 am - 12:00 am	Oral Session 1: Algal Biology - Phylogeny of Microalgae for Biofuels <i>Chair: M.M. Watanabe; University of Tsukuba, Japan</i> <i>Room: Cupples Ballroom</i>
9:00 am - 9:30 am	[K1] Biochemical and physiological manipulation of the alga dunaliella bardawil for production of high value commercial products <i>A. Ben-Amotz; Nature Beta Technologies Ltd., Seambiotic Ltd, Israel</i>
9:30 am – 10:00 am	[O1] Identification of novel strains of microalgae for biofuels applications <i>J.E.W. Polle*, Brooklyn College of CUNY, USA</i>
10:00 am -10:17 am	[O2] Screening diverse algal species by de novo transcriptome sequencing and lipidomic analysis <i>N.D. Clarke*, Genome Institute of Singapore, Singapore</i>
10:17 am – 10:45 am	Coffee Break – Promenade Ballroom
10:45 am – 11:15 am	[K2] Hydrocarbon-producing algae, botryococcus and aurantiochytrium as alternative sources of fossil oil <i>M.M. Watanabe*, I. Inouye, K. Kaya et al; University of Tsukuba, Japan</i>
11:15 am – 11:32 am	[O3] Local bioprospecting for high-lipid producing microalgal strains to be grown on concentrated municipal wastewater for biofuel production <i>W.G. Zhou*, Y.C. Li, M. Min, B. Hu, P. Chen, R. Ruan; University of Minnesota,</i>

	USA
11:32 am – 11:49 am	[O4] A tale of three races: Unraveling the molecular biology of botryococcus braunii T.L. Weiss* ¹ , J.S. Johnston ¹ , K. Fujisawa ² , K. Sumimoto ² , S. Okada ² , T.P. Devarenne ¹ , ¹ Texas A&M University, USA, ² University of Tokyo, Japan
12:00 – 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; <i>University of Nebraska, USA</i> <i>Room: Cupples Ballroom</i>
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; <i>UCLA, USA</i>
2:00pm – 3:00 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; <i>University of Nebraska, USA</i> Part-1 , Part-2 , Part-3 , Part-4 , Part-5 , Part-6
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*; <i>Guangzhou Institute of Energy Conversion, China</i>
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; <i>Iowa State University, USA</i>
3:20 pm – 4:00 pm	Coffee Break – Promenade Ballroom
4:40 pm – 5:45 pm	Oral Session 3: Algal Biology - Metabolic Regulation of Microalgae for Biofuels Chair: M. Hildebrand; <i>University of California, USA</i> <i>Room: Cupples Ballroom</i>

4:00pm – 4:30 pm	[K5] The development of diatoms for biofuels production M. Hildebrand; <i>University of California, USA</i>
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; <i>Colorado School of Mines, USA</i>
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*; <i>Brookhaven National Laboratory, USA</i>
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; <i>Michigan State University, USA</i>
5:45 pm – 6:45 pm	Poster Session 2: Algal Cultivation <i>Room: Promenade Ballroom</i>
Tuesday 19th July 2011	
8:00 am - 8:10 am	Welcome and Introduction
8:10 am - 9:00 am	Plenary lecture 2 <i>Chair: R.T.Sayre; Donald Danforth Plant Science Center, USA</i> <i>Room: Cupples Ballroom</i> [Plenary 2] Overview of US DOE's algal biofuels efforts V. Sarisky Reed; <i>Department of Energy, USA</i>
9:00 am - 12:00 pm	Oral Session 4: Algal Cultivation - Phototrophic Systems in Open Ponds <i>Chair: M.R. Tredici; Università degli Studi di Firenze, Italy</i> <i>Room: Cupples Ballroom</i>
9:00 am - 9:30 am	[K7] Microalgae: can they contribute to a more sustainable energy future? M.R. Tredici; <i>Università degli Studi di Firenze, Italy</i>
9:30 am – 10:00 am	[O10] Raceway ponds and wastewater for low-cost algae production and harvesting T.J. Lundquist; <i>California Polytechnic State University, USA</i>
10:00 am -10:17 am	[O11] Renewable algal resources and landfill leachate remediation S.J. Edmundson*, A.C. Wilkie; <i>University of Florida, USA</i>

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 <i>Department of Chemical and Biomolecular Engineering, Republic of Korea</i> , ² <i>Advanced Biomass R&D Center, Republic of Korea</i>
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 <i>Los Alamos National Laboratory, USA</i> , ² <i>Stanford Synchrotron Radiation Laboratory, USA</i>
11:32 am – 11:49 am	[O13] Remote spectroradiometric monitoring of <i>Nannochloropsis salina</i> growth T.A. Reichardt*, O.F. Garcia, A.M. Collins, A. Ruffing, H.D.T. Jones, J.A. Timlin et al; <i>Sandia National Laboratories, USA</i>
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 <i>Department of Chemical and Biomolecular Engineering, Republic of Korea</i> , ² <i>Advanced Biomass R&D Center, Republic of Korea</i> 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; <i>Utah State University, USA</i>
2:00pm – 3:00 pm	[O15] <i>Scenedesmus incrassatulus</i> algae growth on different trophic conditions for carotenoid production in photobioreactor N.A. Urbina, O. Melchy*, R.O. Cañizares Villanueva; <i>Centro de investigación y de estudios avanzados del IPN, Mexico</i>
2:30 pm – 2:47 pm	[O16] Changes in chlorophyll fluorescence parameters in different growth stages of <i>Chlorella sorokiniana</i> E.R. Mattos* ¹ , R. Hunt ² , M. Van Iersel ¹ , M. Cabrera ¹ , M. Singh ¹ , K.C. Das ¹ ¹ <i>University of Georgia, USA</i> , ² <i>Intellenergy LLC, USA</i>
2:47 pm – 3:04 pm	[O17] Growth measurement and modeling of <i>Dunaliella salina</i> P.E. Gharagozloo; <i>Sandia National Laboratories, USA</i>
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*; <i>Texas A&M University, USA</i>
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; <i>Tsinghua University, China</i> Room: <i>Cupples Ballroom</i>
4:00pm – 4:30 pm	[K9] Algae bio-fuels: A novel photosynthesis-fermentation approach Q.Y. Wu; <i>Tsinghua University, China</i>
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; <i>Iowa State University, USA</i>
4:47 pm – 5:04 pm	[O20] Two-stage hetero and phototrophic algae culture system Y. Zheng, Z. Chi, B. Lucker, S.L. Chen*; <i>Washington State University, USA</i>
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; <i>University of Helsinki, Finland</i>
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; <i>Cellana LLC, USA</i>
5:45 pm – 6:45 pm	Poster Session 3: Algal Products and Economics Room: <i>Promenade Ballroom</i>
7:00 pm	Optional Conference Dinner <i>Missouri Botanical Gardens</i>
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; <i>Colorado State University, USA</i> Room: <i>Cupples Ballroom</i> [Plenary 3] Challenges and Opportunities in the Bioplastics Market N. Danielson; <i>DuPont, USA</i>

9:00 am - 12:00 am	Oral Session 7: Algal Harvesting and Extraction Systems Chair: B.L. Marrone; <i>Los Alamos National Laboratory, USA</i> Room: <i>Cupples Ballroom</i>
9:00 am - 9:30 am	[K10] Algae harvesting: A research perspective on current challenges and future directions B.L. Marrone; <i>Los Alamos National Laboratory, USA</i>
9:30 am – 10:00 am	[K11] Next generation algae extraction and fractionation technology B.L. Goodall*, P. Chandra, T. Czartoski; <i>SRS Energy, US</i>
10:00 am -10:17 am	[O23] Harvesting and processing of microalgae biomass S. Thomas Hall*, J. Obbard, L. Pickell, R. Dorland; <i>Cellana LLC, USA</i>
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 <i>Phycal, Inc., USA</i> , ² <i>Donald Danforth Plant Science Center, USA</i>
11:02 am – 11:19 am	[O25] Low-energy concentration and dewatering of microalgae for fuels, products and remediation R. Youngs; <i>Algaeventure Systems, USA</i>
11:19 am – 11:36 am	[O26] Sedimentation and flocculation of algae using naturally-available ions B.T. Smith*, R.H. Davis; <i>Univ. of Colorado, USA</i>
11:36 am – 12:03 am	[O27] Concentrating and rupturing of algae for lipid C.C. Lin*, C.J. Cheng, P.K. Hong; <i>University of Utah Salt Lake City, USA</i>
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; <i>Colorado State University, USA</i> Room: <i>Cupples Ballroom</i>
1:30 pm – 2:00 pm	[K12] Fuel properties and pollutant emissions from algal methyl ester biodiesel A.J. Marchese; <i>Colorado State University, USA</i>
2:00pm – 3:00 pm	[K13] Algal co-product in ruminant diets S.L. Ivey; <i>New Mexico State University, USA</i>

2:30 pm – 2:47 pm	[O28] Conversion of algal oils to hydrocarbon fuels F. Lupton*, N. Kassa, D. Galloway, S. Lynch; <i>Honeywell Company, USA</i>
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 <i>University of Leeds, UK</i> , ² <i>Plymouth Marine Laboratories, UK</i>
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*; <i>Washington State University, USA</i>
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; <i>Texas A&M University, USA</i> <i>Room: Cupples Ballroom</i>
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; <i>Texas A&M University, USA</i>
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 <i>University of Arizona, USA</i> , ² <i>Michigan Technological University, USA</i>
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; <i>Idaho National Laboratory, USA</i>
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; <i>Washington University in St. Louis, USA</i>
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} ; ¹ <i>MicroBio Engineering, Inc., USA</i> , ² <i>California Polytechnic State University, USA</i>
5:45 pm	Closing Remarks