



Connecticut Science Fair

Quinnipiac University

March 13 - 17, 2012

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Final Judging Results

CT Clean Energy Award

[SchTown] [School] [Teacher]
[Proj#] [FCat] [Project Title]

Award Legend

Trophy Winners = 1, 2, ...
Medalists = m
Winners = w

Middle School

Hebron Oei Home School Mrs. Ellen Oei

5525 P8 Development of a Prototype Pendulum Wave Energy Conversion Device

Award 1 **Student(s)** Maura Oei **Grade** 8 **Town** Hebron

- Dominion's Millstone Power Station Physical Sciences Awards --- 2nd Place- Physical Sciences 8th Grade Ind. - \$200 & trophy, invite to compete Broadcom MASTERS
- ATOMIC (Associated Teachers of Mathematics In CT) Mathematics Awards - with People's United Bank --- Middle School Finalist - Medallion & Arcylic Award
- Barnes Aerospace Applied Technology Awards --- Middle School Finalist - Medallion and acrylic award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- 1st Place Middle School - \$300 Cash and Trophy
- eesmarts/CT Energy Efficiency Fund Sustainable Resources and Practices Awards --- 2nd Place Middle School - \$300 Cash and Trophy
- Goodrich ISR Awards for Excellence In Engineering --- \$1,000 Cash and plaque
- United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, Book, and Annual Report
- MIT Club of Hartford K-12 Initiative --- For excellence in energy related research, middle school, \$150 cash award
- Milton Fisher Science Fair Award for Innovation and Creativity --- For Excellence in Creativity and Innovation by a Middle School student, \$100 cash
- ProConn Power Inc. Award for Sustainable Electrical Energy Research --- \$250 for Excellence in Sustainable Electrical Energy Research

Danbury St. Joseph School Mrs. Page

5005 P7 Designing an Effective Dye-Sensitized Solar Cells

Award 2 **Student(s)** Martha Haddad **Grade** 7 **Town** Danbury

- Dominion's Millstone Power Station Physical Sciences Awards --- 3rd Place- Physical Sciences 7th Grade Ind. - \$100 & trophy, invite to compete Broadcom MASTERS
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- 2nd Place Middle School - \$200 Cash and Trophy
- ASM Materials Education Foundation --- Certificate & \$50 gift card to Amazon given by CSF & medallion
- Office of Naval Research- U.S. Navy / U.S. Marine Corps --- Middle School- Certificate, \$50 gift card to Amazon given by CSF

Greenwich Eastern Middle School Brian Carstens

2512 L8 An Investigation Into Hydrogen-Producing Green Algae

Award 3 **Student(s)** Paul Hansel **Grade** 8 **Town** Old Greenwich

- Pfizer Life Sciences Awards --- 3rd Place- Life Sciences 8th grade- \$100 & trophy and Invite to Compete Broadcom MASTERS
- Barnes Aerospace Applied Technology Awards --- 3rd Place Middle School - \$100 and Trophy, Medallion
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- 3rd Place Middle School - \$100 Cash and Trophy
- eesmarts/CT Energy Efficiency Fund Sustainable Resources and Practices Awards --- 1st Place Middle School - \$500 Cash and Trophy
- Goodrich ISR Awards for Excellence In Engineering --- \$1,000 Cash and plaque
- United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, Book, and Annual Report
- Alexion Biotechnology Awards --- 1st Place- Biotechnology 8th grade- \$300 & trophy and Invitation Compete in Broadcom MASTERS



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Glastonbury Smith Middle School Mr. Falcigno

5528 P8 On the Application of Electrochemical Double Layer Capacitors

Award m **Student(s)** Paul Han **Grade 8** **Town** Glastonbury

- Dominion's Millstone Power Station Physical Sciences Awards --- 1st Place- Physical Sciences 8th Grade Ind.- \$300 & trophy, invite to compete Broadcom MASTERS
- Barnes Aerospace Applied Technology Awards --- 2nd Place Middle School - \$200 and Trophy, Medallion
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion, Acrylic Award
- Connecticut Science Teachers Association's Marty Tafel Student Research Award --- Physical Science 8th Grade - \$500 and invite to CSTA Award Banquet
- IEEE, Connecticut Section --- \$250 Honors Award -Junior
- Barker Mohandas Award for Transportation Research --- \$250 Cash for Excellence in Transportation Related Research
- John B. Trevor Award in Electrical Engineering --- \$500 cash award for an innovative electronic or electrical project
- Leask/Francoeur Family Awards --- 1st Place Middle School- For innovation electrical engineering or computer science - \$100 cash

Glastonbury Smith Middle School Mr. Falcigno

4027 PT Solar Panel in Greenhouse

Award m **Student(s)** Ninad Vora **Grade 7** **Town** Glastonbury
Soham Kale **Grade 7** **Town** Glastonbury

- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion, Acrylic Award
- United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, Book, and Annual Report

Manchester St. Bridget School Kim Maysonet

5502 P8 The Stirling Engine and the Effect of Temperature Differential on Engine Performance

Award m **Student(s)** Nicole Robitaille **Grade 8** **Town** Manchester

- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 8th Grade - CSF Medallion & Acrylic Award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion, Acrylic Award
- Society of Women Engineers - Hartford Section --- Scientific Calculator

New Haven Worthington Hooker Middle School Doug Jones

4024 PT Increasing Solar Energy

Award m **Student(s)** Joshua Levine-Ritterman **Grade 8** **Town** New Haven
Foster Hall **Grade 8** **Town** New Haven

- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Science sJr Team - CSF Medallion & Acrylic Award
- Urban School Challenge Awards --- Middle School Finalist - Medallion and acrylic award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion, Acrylic Award



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Stratford St. Mark School Mr. Phil Flynn

5022 P7 A Bright Idea: Comparing the Efficiency of Incandescent, CFL, and LED Light Bulbs

Award m **Student(s)** Megan Robertson **Grade 7** **Town** Stratford

- Dominion's Millstone Power Station Physical Sciences Awards --- 4th Place- Physical Sciences 7th Grade Ind. - trophy, invite to compete Broadcom MASTERS
- ATOMIC (Associated Teachers of Mathematics In CT) Mathematics Awards - with People's United Bank --- Middle School Finalist - Medallion & Arcylic Award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion, Acrylic Award
- Meyerand Young Woman Scientist Awards --- \$300 cash - Middle School, Physical Sciences
- Wilfred A. Müller Award --- \$150 cash award for creative use of mathematics

Wilton Middlebrook School Robert Moya

5019 P7 Improving Efficiency of Solar Energy

Award m **Student(s)** Kevin Moya **Grade 7** **Town** Wilton

- Dominion's Millstone Power Station Physical Sciences Awards --- 2nd Place- Physical Sciences 7th Grade Ind. - \$100 & trophy, invite to compete Broadcom MASTERS
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion, Acrylic Award

Windsor Madina Academy Aisha Seyal

5033 P7 Charge your device in a power blackout: Effective methods to generate electricity from heat and solar energy using thermoelectric generators

Award m **Student(s)** Osama ElSherbini **Grade 7** **Town** Windsor

- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences 7th Grade - CSF Medallion & Acrylic Award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- Middle School Finalist - Medallion, Acrylic Award
- eesmarks/CT Energy Efficiency Fund Sustainable Resources and Practices Awards --- Middle School Finalist - Medallion and Acrylic Trophy



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High School

Manchester East Catholic High School Ms. Holly Noble

6002 PS Polyvinylidene Fluoride (PVDF) Piezoelectric Generator: A Novel Approach to Harvesting Vibrations from Human Respiration to Power Biological Implant Devices

Award 1 **Student(s)** Bridget Oei **Grade** 10 **Town** Hebron

- Dominion's Millstone Power Station Physical Sciences Awards --- 2nd Place- Physical Sciences Senior High Individual - \$300 & trophy, trip to compete at Intel ISEF
- ATOMIC (Associated Teachers of Mathematics In CT) Mathematics Awards - with People's United Bank --- High School Finalist - Medallion & Acrylic Award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- 1st Place High School - \$500 Cash and Trophy
- eesmar/CT Energy Efficiency Fund Future Sustainability Awards --- 2nd Place High School - \$500 Cash and Trophy and Trip to Compete I-SWEEEP, Houston
- Goodrich ISR Awards for Excellence In Engineering --- \$1,000 Cash and plaque
- United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, Book, and Annual Report
- Alexion Biotechnology Awards --- 5th Place- Biotechnology Senior High- trophy
- Office of Naval Research- U.S. Navy / U.S. Marine Corps --- High School- Certificate, \$75.00 gift certificate
- CT Technology Council Youth Innovation Award --- \$150 Cash Award for Technological Innovation
- I-SWEEEP (International Sustainable World Project Olympiad) --- I-SWEEEP Competition for student (2) and advisor - 2nd Place HS Future Sustainability

Fairfield Fairfield College Preparatory School Dr. Lewis

6008 PS Novel Fiber Optic Dye Sensitized Solar Cell Aided by the Biosynthesis of Diatom Frustules

Award 2 **Student(s)** Kyle Ryan **Grade** 11 **Town** Trumbull

- Dominion's Millstone Power Station Physical Sciences Awards --- 3rd Place- Physical Sciences Senior High Individual - \$200 & trophy
- Barnes Aerospace Applied Technology Awards --- 1st Place High School - \$500 and Trophy, Medallion
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- 2nd Place High School - \$300 Cash and Trophy
- Goodrich ISR Awards for Excellence In Engineering --- \$1,000 Cash and plaque
- Alexion Biotechnology Awards --- 2nd Place- Biotechnology Senior High- \$400 & trophy,
- Yale Science & Engineering Association, Inc. --- Certificate, Medallion, \$50 gift card to Amazon given by CSF
- Yale Chapter of Sigma Xi, The Scientific Research Society --- Dinner at Mory's for four - with members of Yale Chapter of Sigma Xi
- Lunch with a Patent Attorney --- Lunch with a Patent Attorney



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Greenwich Greenwich High School Andrew Bramante

6032 PS Design of a Smart Brick with Improved Insulation and Intuitive Reflection of Sunlight

Award 3 **Student(s)** Lindsey Noskin **Grade** 11 **Town** Greenwich

- Dominion's Millstone Power Station Physical Sciences Awards --- 5th Place- Physical Sciences Senior High Individual - trophy
- Barnes Aerospace Applied Technology Awards --- Senior High Finalist - Medallion and acrylic award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- 3rd Place High School - \$200 Cash and Trophy
- eesmarts/CT Energy Efficiency Fund Future Sustainability Awards --- High School Finalist - Medallion and Acrylic Award
- The National Society of Professional Engineers --- Certificate, Lapel Pin, \$50 gift card to Amazon given by CSF
- Connecticut Architecture Foundation --- \$100 Gift Certificate to Barnes and Nobles
- Northeast Utilities: Environmental Management --- Senior - \$250 Scholarship, energy conservation and renewable energy sources
- Society of Women Engineers - Hartford Section --- Scientific Calculator
- University of Connecticut - Physics Department --- UCONN Early College Experience Program: Physical Sciences - Co-Op \$100 Gift Certificate
- I-SWEEEP (International Sustainable World Project Olympiad) --- I-SWEEEP Competition Invitation to submit-
- Education Connection- Center for 21st Century Skills Awards --- \$100 For innovation in science or engineering

Danbury Immaculate High School Mrs. Murphy

3510 LST Microbial Fuel Cell Efficiency and Design

Award m **Student(s)** Merna Haddad **Grade** 11 **Town** Danbury
Adriana DeNardis **Grade** 11 **Town** Danbury

- Pfizer Life Sciences Awards --- Finalist - Life Science Senior High Team - CSF Medallion & Acrylic Award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- High School Finalist - Medallion

Greens Farms Greens Farms Academy Tracy Haswell

3026 LS Algae Biodiesel

Award m **Student(s)** Emily Petno **Grade** 12 **Town** New Canaan

- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- High School Finalist - Medallion
- eesmarts/CT Energy Efficiency Fund Future Sustainability Awards --- High School Finalist - Medallion and Acrylic Award

Greenwich Brunswick School Mrs. Dana Montanez

6501 PST A Comparative Analysis of Bio-Diesel Emissions Versus Emissions of Petroleum Diesel

Award m **Student(s)** Matthew Mayfield **Grade** 11 **Town** Greenwich
Vikram Bodas **Grade** 10 **Town** Greenwich

- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior Team - CSF Medallion & Acrylic Award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- High School Finalist - Medallion
- United Technologies Corporation Awards --- \$500 in UTC Common Stock, Plaque, Backpack, Book, and Annual Report



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Greenwich Greenwich High School Andrew Bramante

6079 PS Recovery of Light Hydrocarbon Fuels from PETE Recycling with Concurrent Reduction in the Recyclable Footprint

Award m **Student(s)** Clara Eizayaga **Grade** 11 **Town** Riverside

- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- High School Finalist - Medallion
- U.S. Metric Association --- Certificate & \$50 gift card to Amazon given by CSF
- Air and Waste Management Association, Connecticut Chapter --- \$100 Senior, Environmental Research, waste recycling related
- MIT Club of Hartford K-12 Initiative --- For excellence in energy related research, high school, \$150 cash award

Greenwich Greenwich High School Andrew Bramante

6075 PS Application of iDS-PBR to Prolongate Algal Photobiolysis in *C. Reinhardtii*

Award m **Student(s)** Thomas Yang **Grade** 11 **Town** Greenwich

- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- High School Finalist - Medallion
- eesmarks/CT Energy Efficiency Fund Future Sustainability Awards --- High School Finalist - Medallion and Acrylic Award

Hebron RHAM High School Mrs. Kristin Spinelli

6081 PS The Use of Berries from Connecticut Invasive Plants in Dye- Sensitized Solar Cells

Award m **Student(s)** Tim Breckel **Grade** 9 **Town** Hebron

- Audubon Connecticut & Arch Chemicals Environmental Awards --- HS Finalist - Audubon gifts, CSF Medallion, Acrylic award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- High School Finalist - Medallion
- Alexion Biotechnology Awards --- Finalist - Biotechnology Senior High - CSF Medallion & Acrylic Award Souvenir

Madison Daniel Hand High School Madhuparna Roychoudhury

6517 PST Can you charge your phone wirelessly? Cordless electricity transmission by piezoelectric excitation via low frequency acoustic waves.

Award m **Student(s)** Shayan Roychoudhury **Grade** 9 **Town** Madison
Wesley Kimmel **Grade** 10 **Town** Madison

- Dominion's Millstone Power Station Physical Sciences Awards --- 2nd Place- Physical Sciences Senior High Team- \$300(split) & trophy
- Barnes Aerospace Applied Technology Awards --- 2nd Place High School - \$300 and Trophy, Medallion
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- High School Finalist - Medallion
- GENIUS Olympiad --- GENIUS Olympiad Competition for HS student (s) and advisor - Energy



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Middletown Xavier High School Manoj Rahematpura

6515 PST Testing the Viability of Adaptive Winglet Technology to Improve Fuel Efficiency on Midsize Commercial Airliners using Computational Fluid Dynamics

Award m

Student(s) Christopher Muckle
Miraj Rahematpura
Mario Chris

Grade 12 **Town** Madison
Grade 12 **Town** Middletown
Grade 11 **Town** Storrs

- Dominion's Millstone Power Station Physical Sciences Awards --- 1st Place- Physical Sciences Senior High Team- \$500 (split) & trophy
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- High School Finalist - Medallion
- American Institute of Aeronautics & Astronautics - Connecticut Section --- \$200 award, certificate
- I-SWEEEP (International Sustainable World Project Olympiad) --- I-SWEEEP Competition for student (2) and advisor

Norwich Norwich Free Academy Mr. Scanlon

6007 PS Role of Electro-Chemical Double Layer Capacitors in Energy Storage

Award m

Student(s) Ian Dakers

Grade 12 **Town** Bozrah

- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- High School Finalist - Medallion

Putnam Putnam Science Academy Hakan Duman

6513 PST Using Environmental Friendly and Cost Effective Ferrofluid Magnetite as an Adsorbing Agent to Efficiently Remove Petroleum Spills from Water Sources and its Commercial Application with a Robot Arm

Award m

Student(s) Zekeriya Abacioglu
Bahadir Ozgenturk

Grade 12 **Town** Putnam
Grade 12 **Town** Putnam

- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior Team - CSF Medallion & Acrylic Award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- High School Finalist - Medallion

Storrs E. O. Smith High School Robert Pirrie

6026 PS Membranes for Biochemical Separations

Award m

Student(s) Paula Chen

Grade 11 **Town** Storrs

- Dominion's Millstone Power Station Physical Sciences Awards --- Finalist - Physical Sciences Senior High - CSF Medallion & Acrylic Award
- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- High School Finalist - Medallion
- Yale Science & Engineering Association, Inc. --- Certificate, Medallion, \$50 gift card to Amazon given by CSF

Westport Staples High School Dr. Nick Morgan

3037 LS The Application of the Photosynthetic Hydrogen Production of *C. reinhardtii* in Hydrogen Fuel Cells

Award m

Student(s) Jay Tsai

Grade 12 **Town** Westport

- Clean Energy Finance and Investment Authority Alternative/Renewable Energy Awards --- High School Finalist - Medallion
- Education Connection- Center for 21st Century Skills Awards --- \$100 For innovation in science or engineering