

PROJECT: Los Angeles Community College District - Build Green



PROJECT SUMMARY: LACCD-BUILD Green is a \$5.7 billion green building project that spans over 400 buildings on 9 separate college campuses in Los Angeles. The goal of LACCD-BUILD Green is to modernizing its colleges while protecting the environment and improving the quality of life for its 250,000 students, teachers and affiliates.

PROJECT CONTACT: Larry Eisenberg, Former Executive Director, Facilities, Planning and Development Los Angeles Community College District.

SIZE: Over 1 million sq. ft.

SCOPE: Application of PURETi surface treatment to building exterior, windows and roofing.

COST: \$0.70 per sq. ft. fully applied.

ROI: Over 50% annual reduction in maintenance costs associated with water, energy, chemical usage and labor.

LEED: LEED NC V2.2 Innovation & Design (registered)

"We went with an innovative titanium dioxide coating that wards off dirt and pollution, removing organic pollutants from the air and reversing the effects of greenhouse gases. It proved a major success and will cut our maintenance costs for years to come." — Executive Director, Larry Eisenberg. LACCD-BUILD Green

PROJECT PROFILE: LACCD - DISTRICT WIDE PHOTOCATALYTIC Ti02 COATING PROJECT

PURETi contacted LACCD-BUILD Green in 2006, introduced the technology and secured the initial test in 2007. The LACCD tested and then specified PURETi building façade, glass and roof surface treatments to save on the energy, water and chemicals used in maintenance, to help purify the air through smog reduction and reduce building maintenance costs associated with labor. PURETi met the subjective, self-cleaning and building maintenance reduction criteria established by the LACCD in a test application to one building that began in 2007. These criteria included visual inspection of building facades and the reduced need for window washing. Based on the successful performance of PURETi over 18 months, the LACCD initiated the District Wide Photocatalytic TiO2 coating project that called for the treatment of 1 million sq. ft. of building exteriors. PURETi met the requirement of proving via a dye dissipation test on opaque substrates (cement, brick and cladding) and a water sheeting test on glass substrates that the treated surfaces are photocatalytic. Five years later, the PURETi treated buildings are significantly cleaner than the untreated controls.

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PROJECT TITLE: Goshow Architects – Interior NYC Office



PROJECT SUMMARY: Improve IAQ with no ongoing energy expenditure, reduced owner liability, increase resale value of building and improve the health of building occupants.

PROJECT CONTACT: Nancy Goshow, AIA - owner of Goshow Architects

SIZE: 2,000 sq. ft. occupied tenant office building.

SCOPE: PURETi was applied to the interior windows and light fixtures after all renovation work had been completed and all furniture had been moved in. The application took one day.

COST: Less than \$1.00 per sq. ft.

ROI: LEED POINT(s): LEED C&I, Innovation & Advanced Coating (registered)

"Our new Manhattan space is already registered under the USGBC program for LEED commercial interiors. We are planning on achieving a minimum LEED C.I. Silver certification for our office building design and construction. PURETi self-cleaning and air purifying surface treatments whelp us achieve that goal as well significantly reduce our maintenance costs and improve IAQ."

- Nancy Goshow, Managing Partner

PROJECT PROFILE:

Nancy Goshow, owner of Goshow Architects, and Glen Finkel, co-founder of PURETi, met in 2008 while serving together on a panel on Green Building Practices hosted by the Association of Owners and Developers. When Nancy learned about PURETi, she requested that her newly built offices be treated to insure the highest possible level of IAQ.

PURETi was spray applied to all the interior window glass and all the fluorescent light fixtures of this 2,000 sq. ft. office space. Application for a LEED point was made as an Innovation in Advanced Coatings. PURETi was certified by Scientific Certification Systems, a USGBC recognized certifying body, as VOC Free under their Indoor Advantage Gold program and metered and subjective smell tests confirmed PURETi's air purifying power. Five years later, Goshow remains satisfied with the performance of PURETi.

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PROJECT TITLE: Malibu, California Residence



PROJECT SUMMARY: Indoor Air Quality Remediation - 10 year old, 15,000 sq. ft. glass home on the beach in Malibu, CA. Occupants complained of foul odors and experiencing nausea and headaches in connection with poor IAQ. All previous remediation methods failed. PURETi was able to improve the IAQ, thus contributing to the health and well-being of occupant.

PROJECT CONTACT: Craig Grossman, CEO of Allied Biosciences.

SIZE: 15,000 sq. ft. glass home on the beach in Malibu, CA, 80% glass facades.

SCOPE: Application of PURETi to windows, carpeting and furniture for the accomplished purpose of significantly improving indoor air quality.

COST: Less than \$1.00 per sq. ft. fully applied.

ROI: Eliminated health cost associated with sick building syndrome, Prevented home owners from having to sell home due to poor indoor air quality.

"This particular family came to us wanting to create the healthiest environment possible in their home," said Craig Grossman, Chief Executive Officer, ABS. PURETi helped them achieve that goal by continuously and proactively cleansing the air of indoor air pollutants. Two weeks after the PURETi application, the customer reported better indoor air quality and respiratory problems experienced prior to the application were eliminated completely."

- Craig Grossman, Chief Executive Officer, ABS

PROJECT PROFILE:

This 10 year old, 15,000 sq. ft. glass home on the beach in Malibu had developed its own sick building syndrome. The husband and wife owners complained of foul odors and were experiencing nausea and headaches in response to the odors. Conventional methods of mold remediation had proved ineffective. The home owners contacted Allied Biosciences, specialists in Residential Air Quality Enhancement, who sub-contracted the project to PURETi.

PURETi photocatalytic solutions were spray applied to all interior surfaces and accomplished all goals. All odors were eliminated safely and efficiently through photocatalysis within 3 days. The home owners reported that their symptomatic responses (nausea and headaches) to the IAQ disappeared. This residential indoor air quality problem had generated significant health care and mold remediation costs with no result. The owners were facing the need to sell their home in a down market in a distress sale. The successful outcome of the PURETi treatment here created an ROI that in this case was immediate and will provide long term health benefits to occupants. One application of PURETi last up to five years.

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PROJECT TITLE: Capricorn Capital, NYC Interior Office



PROJECT SUMMARY: Indoor Air Quality Remediation – newly renovated and occupied office on 12th floor of 660 Madison Avenue in NYC. Occupants were concerned with their IAQ, complaining of paint odors and coughing and wished to evaluate PURETi's remediation efficacy. TVOC and humidity levels were monitored for a week and serious issues were identified. TVOC levels ranged from an unacceptable low of 600 uG/m3 to a seriously dangerous level of 3,000 uG/m3. Humidity levels were steadily under 25%; also below healthy levels.

PROJECT CONTACT: Ion Yadigaroglu, CEO of Capricorn Capital.

SIZE: 2,000 sq. ft. commercial office in Class A building

SCOPE: Application of PURETi to windows and fluorescent light fixtures for the accomplished purpose of significantly improving indoor air quality.

COST: Less than \$1.00 per sq. ft. fully applied.

ROI: Eliminated health and absenteeism costs associated with sick building syndrome,

PROJECT PROFILE:

This upscale commercial office space was suffering from a sick building syndrome created by low humidity and episodic truck deliveries in the basement that resulted in noxious fumes being transported by elevator shafts to upper stories..

In 2012, PURETi photocatalytic solutions were spray applied to all interior window surfaces and light fixtures and accomplished all goals. All odors were eliminated safely and efficiently through photocatalysis and within 3 weeks TVOC levels dropped below 400 uG/m3 on a steady basis. The office occupants reported that their symptomatic responses (coughing) to the IAQ were significantly reduced.

The successful outcome of the PURETi treatment here created an ROI that in this case was immediate but incalculable. PURETi is now being contracted by Mr. Yadigaroglu to treat the interior and exterior windows of his newly renovated Manhattan town home in 2014.