



Ephemeral Light Dichroic Glass Installation Office 52 Architecture

Written by AMANDA ZURITA

Photographed by JEREMY BITTERMANN

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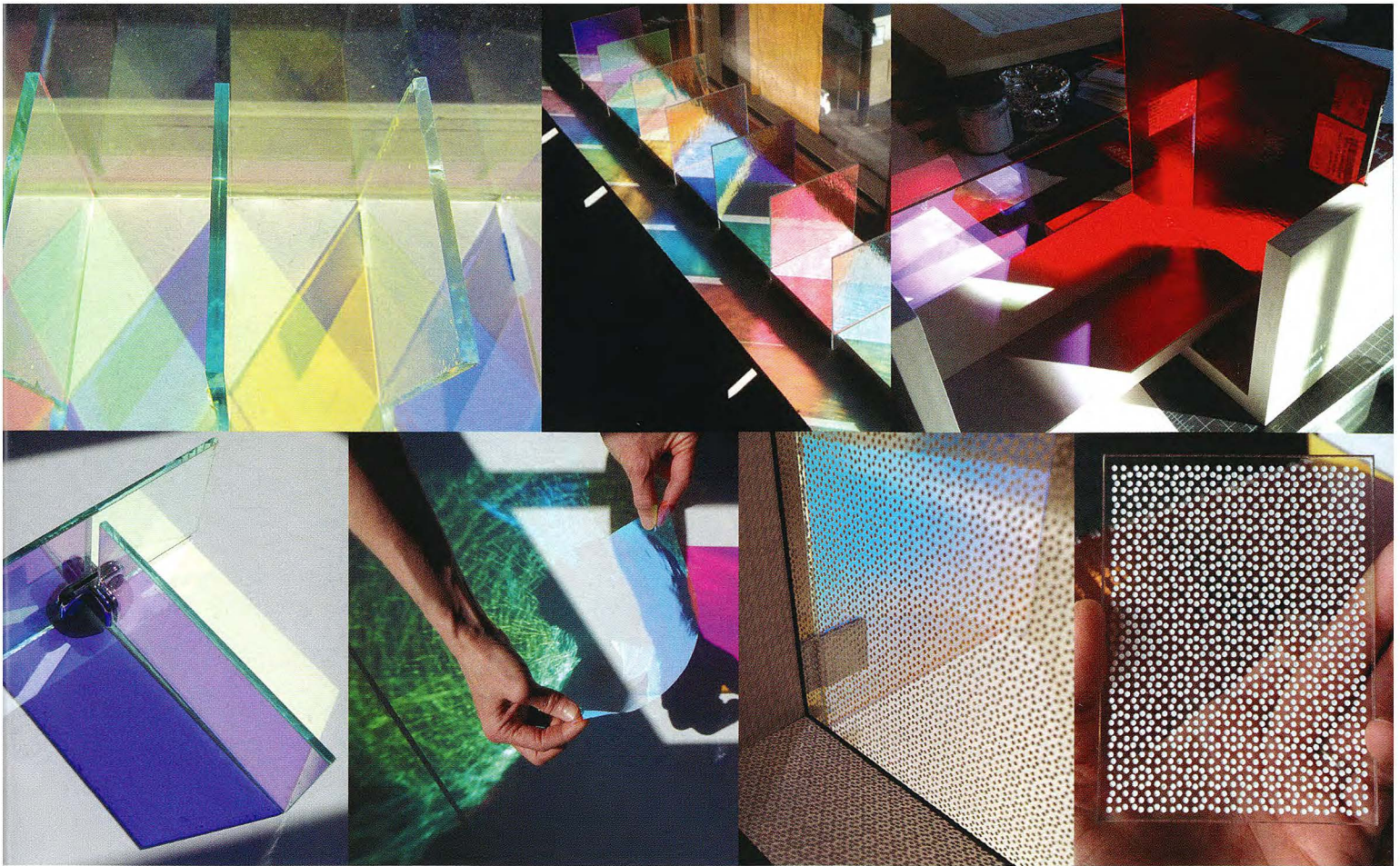


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**“The colors and glass
are an inspiration to
anyone who would
see this building;
it stands out from
the crowd.”**

—JAI ME HAYON, DESIGNER
GRAY AWARDS 2018 JUDGE





DATE OF COMPLETION

July 2017

COLLABORATORS

Architect of record:
Stantec

Structural engineer:
ARUP

General contractor:
Jendoco Construction Corporation

LEED consultant:
evolveEA

Narima dichroic glass supplier:
Schott AG

Dichroic glass fin assembly
fabrication and lamination:
Triview Glass California

Unitized curtain wall fabricator:
United Architectural Metals

Additional fabrication:
Viracon

WHEN THE TEAM AT OFFICE 52 ARCHITECTURE BEGAN CREATING A NEW FAÇADE FOR ONE OF THE NATION'S TOP NANOTECHNOLOGY AND ENGINEERING-SYSTEMS RESEARCH INSTITUTIONS,

they quickly realized that a static design simply wouldn't do. So, for the curtain wall that fronts Scott Hall at Carnegie Mellon University, the Portland-based firm took a scientific approach that combined art with a cutting-edge material to literally reflect the building's purpose.

Utilizing dichroic glass, which displays different colors in certain lighting conditions, Office 52 juxtaposed two colorful combinations set at different angles to make the building come alive. Dichroic glass is made up of microlayers, each infused with metal oxides that reflect varying hues depending on the angle of the viewer and the quality of the light passing through the glass. The technology was originally developed by NASA as a way to filter light at a micro level, and the resulting product was first used in satellite mirrors and spacesuit visors.

Office 52 also incorporated a custom-designed ceramic glass frit with a geometric dot-matrix pattern that represents photonic quasicrystal structures, which influence optical transmission and reflectivity—another nod to the nanoscience research underway inside Scott Hall. As one moves closer or farther away from the glass, the dot-matrix design seems to shift.

Aside from merely looking good, the curtain wall meets important functional requirements. Fin panels on the building's south and west sides serve as sun shades and result in interior opacity of 40 percent, helping to cut down on energy consumption and making the lab one of the most energy efficient in the country, an achievement recognized when Scott Hall earned LEED Gold certification. Together the glass panels achieve Office 52's goal: to create constantly changing colors and optics that shift not only with the observer's angle, but also with the seasons and positions of the sun. In effect, Scott Hall blinds you with science—in the best way possible. *

Gray

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Nº 43: DEC. 2018 / JAN. 2019

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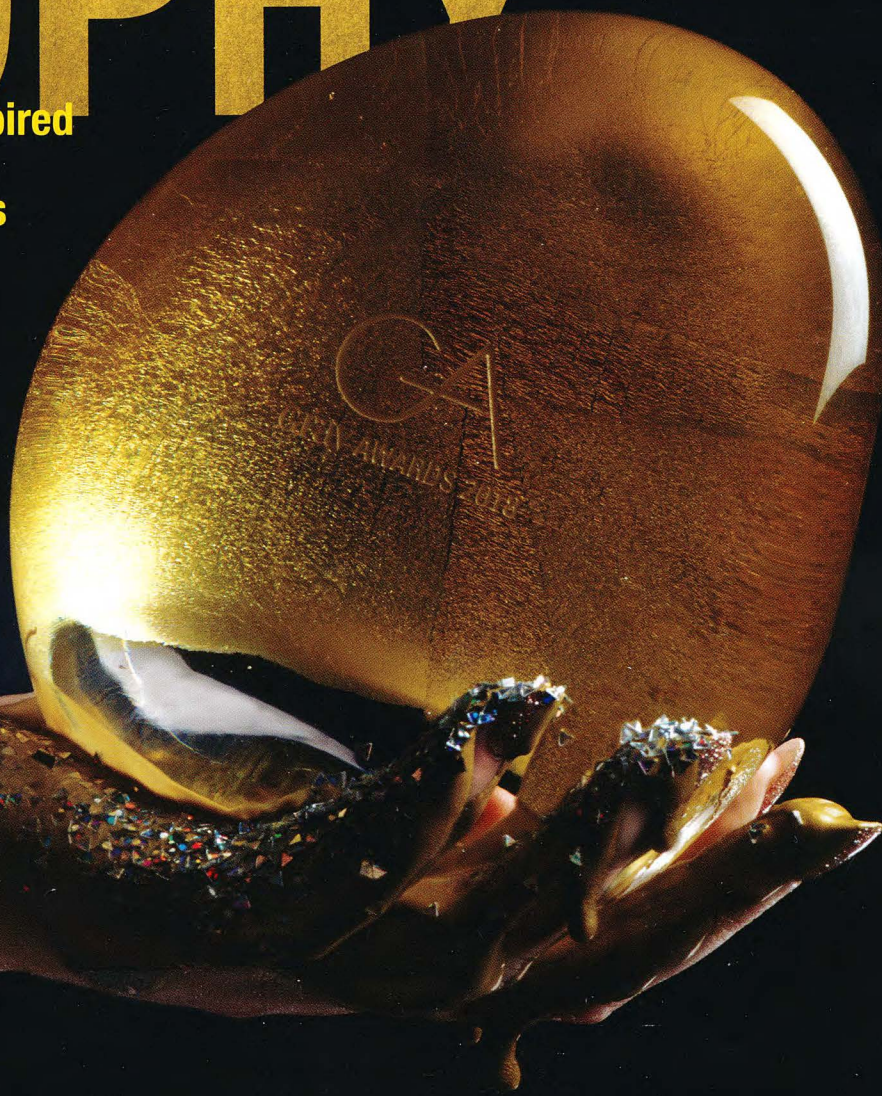
AvroKO

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Ken Fulk

Peter + David Walker

Snøhetta



HUNTERS

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