



Michael Elkan

Innovating Tradition

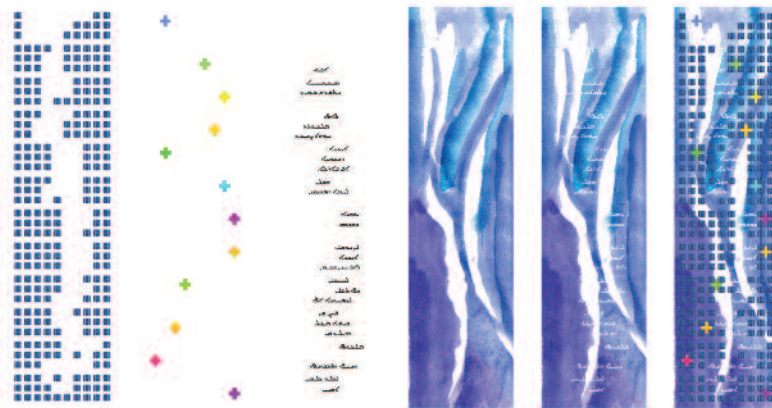
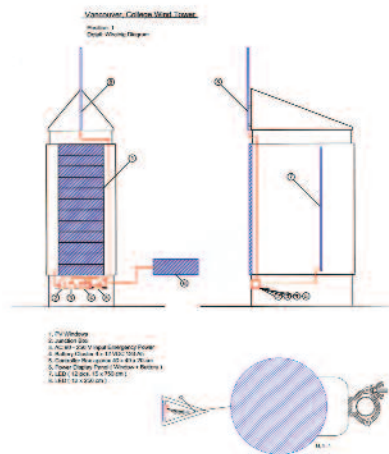
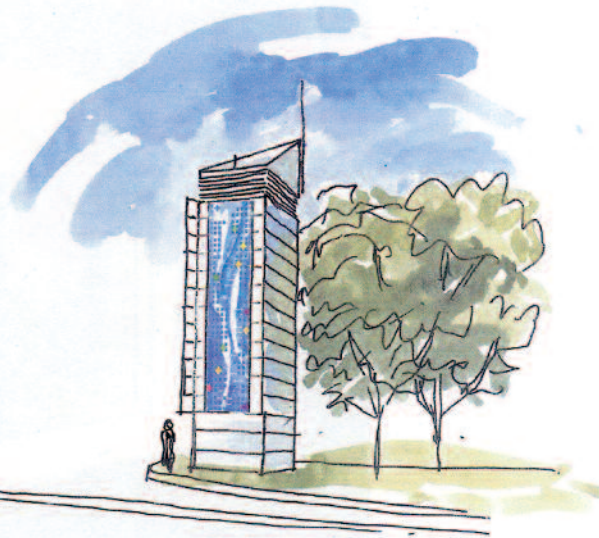
John Bentley Mays

FOR A THOUSAND YEARS, architectural glass has been an art of light, whether reflecting or transmitting it, letting it pass through white and whole or splintering it into the colours of the rainbow. In her recent work, however, acclaimed Toronto glass artist Sarah Hall has added something modern to the repertoire of glazing's near-infinite play with light: the power to transfigure sunshine into electricity. Determining how best to use this tool has taken Hall into the scientific intricacies of photoelectric cell technology; the process by which thin slices of silicon and metals such as cadmium telluride generate current from light. But as Hall told me in a recent interview, the research has also been an aesthetic and spiritual meditation on art-making in the present age.

"Especially in North America," Hall says, "Solar-cell technology has been primarily in the hands of engineers who have considered it only as a practical energy source. So it would sit on top of a roof at the right angle, collecting the greatest amount of energy, but without any consideration of how it really looked on the building."

Then came a surprise, about four years ago, when she discovered what European architects were doing with this humdrum technology.

"What I saw in Germany were beautifully designed and integrated façades in which energy collection and



Lux Nova, design process and sketches, Regent College, Vancouver, BC

Sarah Hall

aesthetics were all considered equally. Photovoltaic cells didn't have any alien quality. They could become absolutely beautiful, engaging and interesting parts of the building. German architects have been my inspiration in this, and the European architects Françoise-Hélène Jourda and Tjerk Reijenga."

Hall first demonstrated the incorporation of photovoltaic cells in her own glass art in 2005, in a piece she contributed to Concordia University's entry in the U.S. Department of Energy's Solar Decathlon, an international competition of solar-powered house designs held each year in Washington, D.C. This beautiful work was called *Northern Light*, and its cells produced energy that was stored and later used to illuminate the building's foyer.

The first permanent installation of photovoltaic glass art in North America is the award-winning *True North/Lux Nova*.

Fabricated in Germany, this intensely lyrical composition was designed for the façade of a twelve-metre ventilation tower over an underground theological library at Regent College, a Christian

studies institution on the campus of the University of British Columbia in Vancouver. *True North/Lux Nova* stands in a park at Regent College's heart, celebrating Christian devotion with its inscription of the Lord's Prayer in Aramaic, the language of Jesus. The religious theme is further reinforced by twelve crosses that shimmer against a cascade of silvery blue, violet and white. This luminous tower of fused and etched glass also provides an eloquent symbol of peace between humankind and the environment; it declines to add to the burden already on the public power grid, and instead creates from sunlight (via embedded solar cells) the energy needed to power a column of light that shines by night behind the glass panels.

Hall's task of integrating her new findings into art was an adventure with many dimensions.

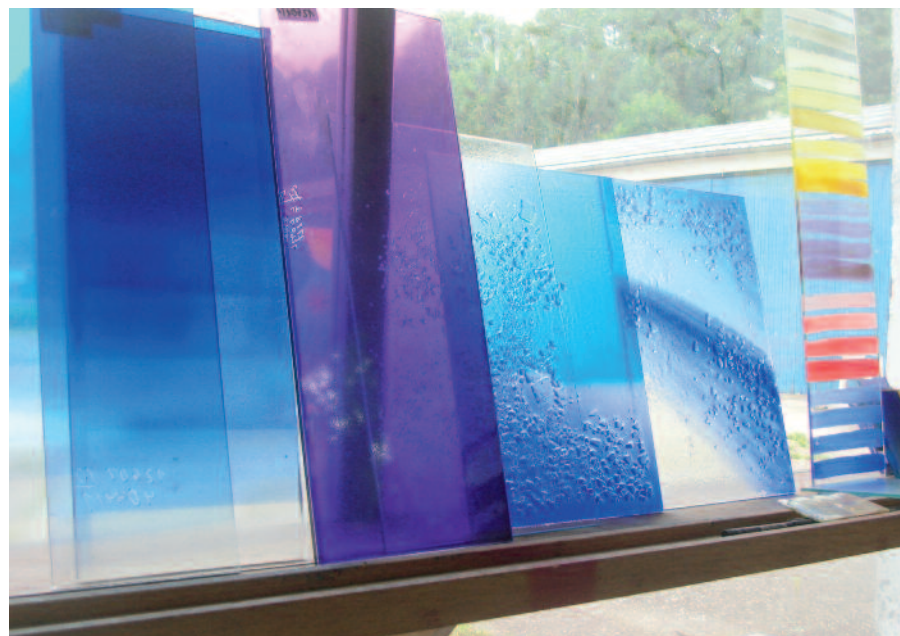
"As I move through a project, it is a spiritual exploration for me as well as an artistic one."

"I certainly gained a great deal of strength, because in tackling this, there were so many things I had not done before. I had not brought an energy source together with my art. I hadn't engaged with electricians and a whole new set of technologies that were new. It was terrifically challenging. And it was so exciting to see it work! The first time we hooked up the conduit, bringing the energy from the sun to that lighting column, it was so exciting to have come through a long and challenging journey, and see it work, and find that excitement with the whole group of people who had been with me on the journey."

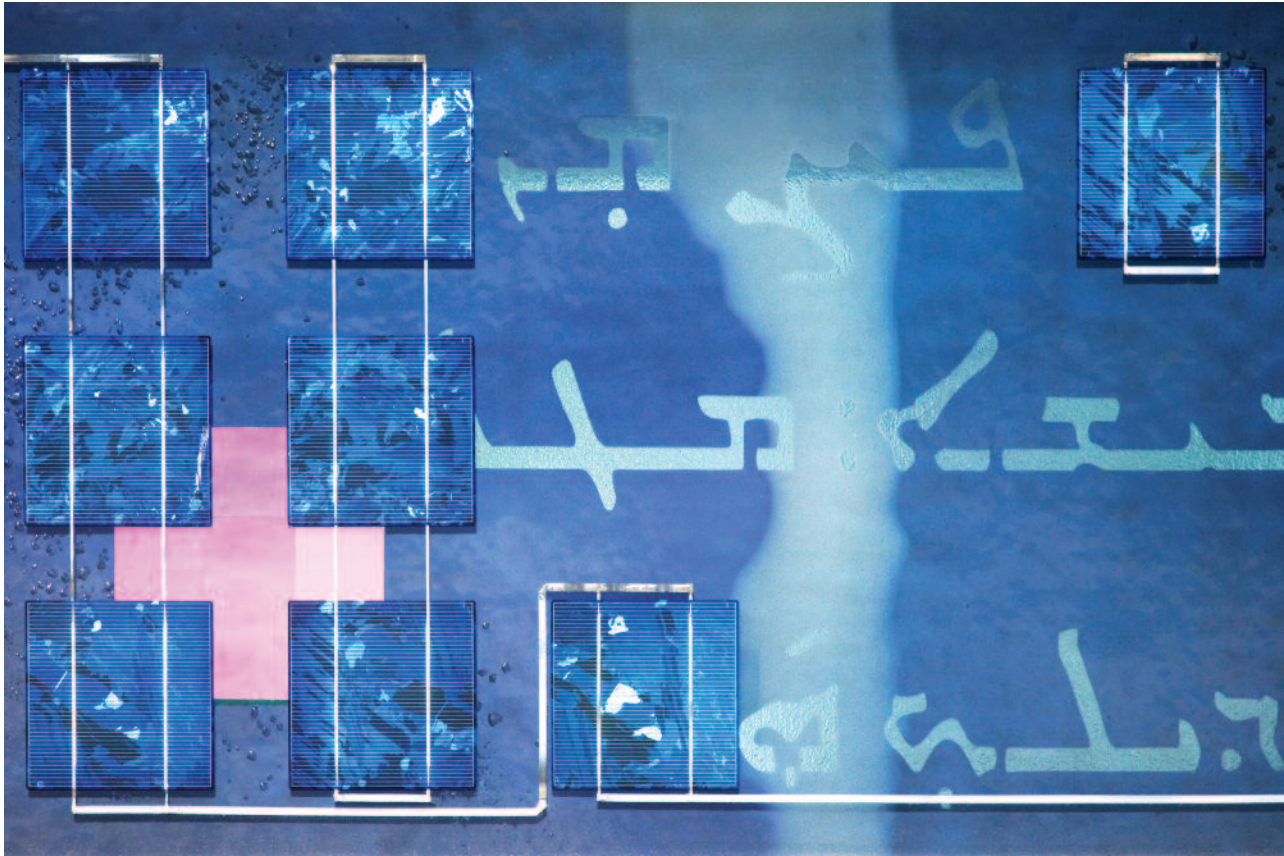
Like the technological aspects of the piece, the imagery of it developed from close study, this time on the site's cultural and natural features. Using the Lord's Prayer in Aramaic was suggested by academics at Regent College. The twelve shining crosses of high-tech glass, eleven of them framed in grids of photovoltaic material, were obvious choices of imagery for a work on a Christian campus — though Hall puts an interesting and deeply personal spin on their use.

Overleaf:
Lux Nova, solar art glass wind tower, Regent College, Vancouver, BC
◇ 2007c

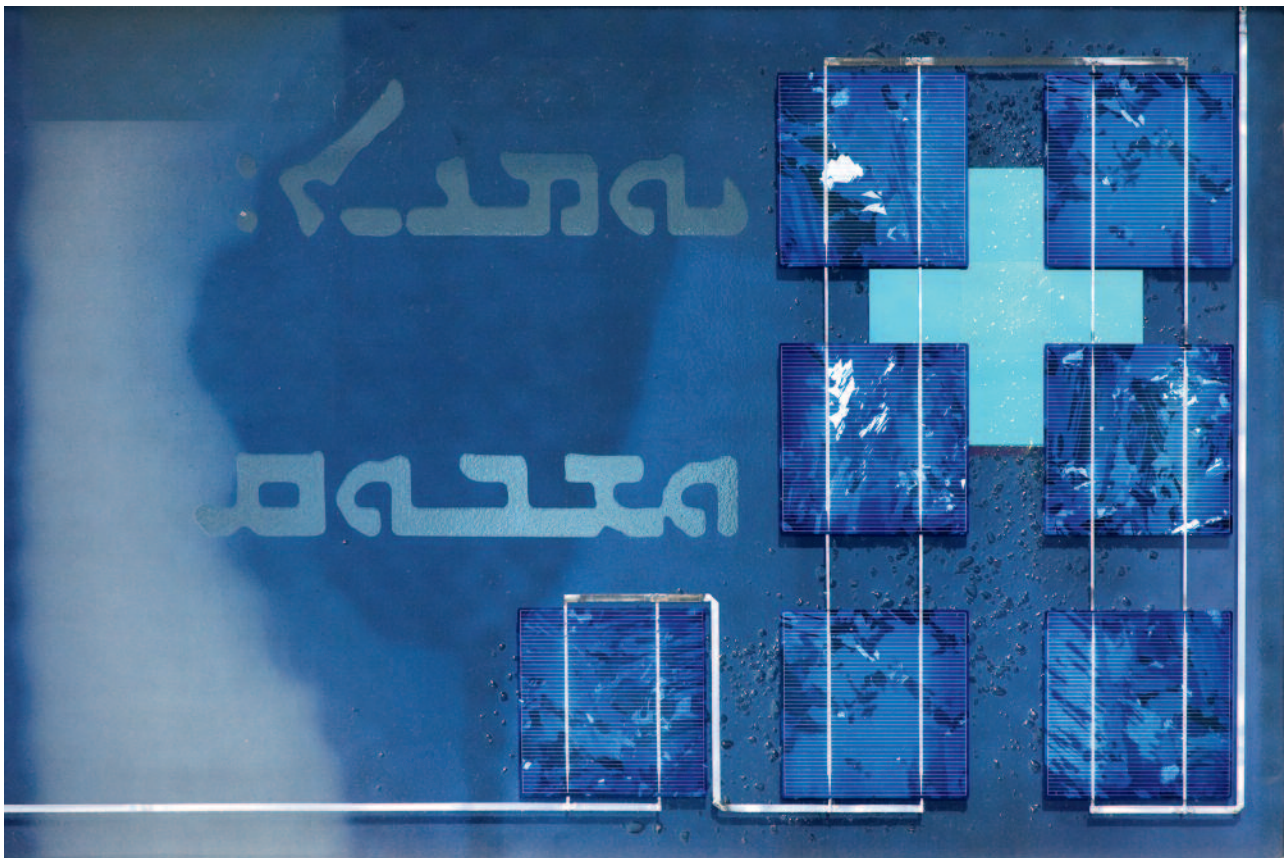
Bottom: Various glass samples created for Lux Nova



Clive Groat



Details, *Lux Nova*, showing solar cells, dichroic glass and wiring pattern, Regent College, Vancouver, BC ↻ 2007c



Michael Elkan



Lux Nova,
daylight view of the wind tower,
Regent College, Vancouver, BC ✦ 2007c

“The crosses completely transmit light and they reflect it. Dichroic glass has this very interesting double edge: they used it for making the windshields of the NASA space shuttle because it reflects all rays, but it also transmits. I used it so that one could follow the eleven crosses that are trapped in a grid. The one at the very top floats free. So there is a little story in there about our struggles and how we are usually held in by things around us. Hopefully one achieves some freedom in the end.”

Similarly, the cool colours of the work came from a consideration of the College’s position on British Columbia’s coastal landscape.

“When I first began thinking about it, doing preliminary drawings and so on, I had an idea for some golds and reds and very warm, fiery colours. Then I spoke to a couple of the theology professors about the light in Vancouver. One of them had moved from Alberta, bringing his home decorations with him, only to find that they didn’t work in Vancouver. The light is silvery, he told me. The prairie colours don’t resonate. So I sat and looked at the light a long while, and I moved to that blue realm/white realm. The light in this place was different. It’s affected by the light of the sea and mountains, which is silvery. It’s not the hard light we’re used to in Ontario, and elsewhere in the interior of Canada. With each project I do, I’m very interested in exactly where that place is. I spend a fair amount of time sitting and watching and looking at what happens, and talking to people about what they would like to see happen in that place.”

For Hall, Vancouver architect Clive Grout’s ventilation tower, standing tall in the park and oriented so that its top points to the star Polaris, is a beacon in the darkness, a device for finding one’s way through the wilderness of contemporary civilization.

“I studied in Wales, where we did a lot of trekking through the countryside. We’d see these big stone steles that had inscriptions on them. You can’t read them anymore, but you knew that they were marking something for the people who came after them. They weren’t grave markers. They were markers to say, ‘I’ve come here on my journey, take a look at this, it might help you find your way ahead.’ And I see the tower, and my artwork in it, like that — pointing to the North Star, that fixed still-point in our universe. So that idea of wayfinding was part of my thinking, too. It wasn’t something I thought of immediately. It grew out of the process of making this piece.”

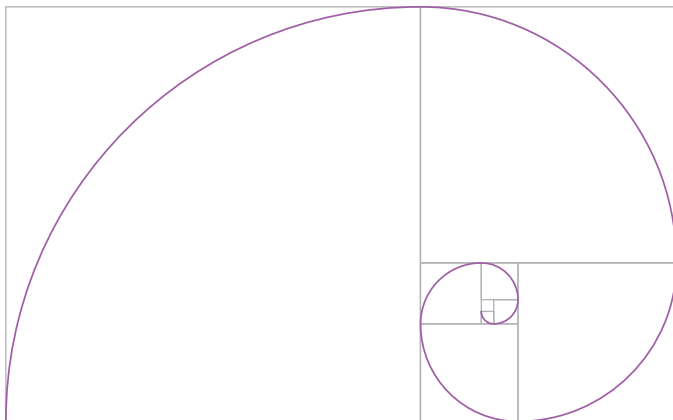
Michael Elkan

Lux Nova,
evening view of the wind tower
being illuminated by solar power,
Regent College, Vancouver, BC ✦ 2007c

True North/Lux Nova is a strong culmination of Sarah Hall's experimental melding of modern technologies and her ancient art. But it is also an important moment in her ongoing campaign to renew the art of architectural glass in our time.

"Most people's perception of stained glass is based on the traditional windows they saw when they were growing up. Especially here in Canada, that's a very Victorian perception of things. It's something I have very much wanted to change. I have seen extraordinary contemporary work in stained glass, and I've wanted to make sure that it stays contemporary in our world. It's a medium that can be thoroughly modern. It isn't a frozen story from the past."

"I have continually explored all kinds of new technologies and techniques. I'm particularly interested in photovoltaic technology because it speaks to me of the preciousness of our world. We need to care for the world. Making energy that doesn't bring any harm to the world is a really beautiful way for me to tie in my concerns for creation with my artwork. I want to encourage architects and engineers to use energy differently, and also to engage the public imagination with ideas about art and energy."



John Bentley Mays was an award-winning Toronto writer on architecture, visual art, design and contemporary culture. He was an architecture columnist for *The Globe and Mail*, and a frequent contributor to *Canadian Art*, *Azure*, *Canadian Architect* and other periodicals.

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