Hailey Guzik
Transformation Project
IMCA 220
Nov 2



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a total internal reflection

an intracellular iridescent apparatus; CNC-fabricated wood structure, layered flesh tone mesh, motorized fresnel lens/light apparatus, chain, immersive sound

12 minute looping duration

2026

Link to audiovisual documentation (Vimeo, 4m54s)

Artist Statement

Situated within a speculative intracellular terrain where energetic and physical matter interact, this work explores iridescence as a diffractive phenomenon. The work draws on research that positions iridescence as a survival mechanism in plants, where colour is not produced from pigmentation, and instead from nanogeometries found under the skin that interact with light, called photonic crystals. Recent scientific studies reveal that iridescence in certain plant species contributes to enhanced photosynthetic efficiency, suggesting potential for future bio-mimetic solar energy technologies and enhanced light harvesting in bio-engineered plants.

This serves as the speculative departure for the work, placing the audience at the bodily site of an iridescent transformation. Approaching iridescence through phenomenal considerations of duration, relation, and occurrence, the title of the work, a total internal reflection, derives from the optical phenomenon by which light meets a medium's edge and redirects back into itself rather than propagating outward. This concept structures the spatiotemporal nature of the work, inciting viewers to encounter iridescence from a recursive interior position. Where conventional iridescence appears as smooth surface which allures, deceives, and distracts, the work moves through seduction to inhabit iridescence from within and below the epidermal surface, illuminating the underlying structures of its making.

Shifting from an exterior vantage point, to one of interior relation, the work expands scenographic space to create an immersive audiovisual environment. Viewers walk around a central arch-like structure to experience the work from different points of view. The wood structure echoes the shape of diffracted light cast from the central Fresnel lens/light apparatus, and layered flesh tone mesh references the epidermal layer where iridescence occurs. The motorized component of the lens casts additional light onto the surrounding walls, enveloping the viewer. An immersive sound world built from spectral distortions of low frequency sine wave oscillations, tuned as sonic parallels to the waveforms of light, are layered with granular synthesis and voice that speculates on the nature and poetics of light, energy, and iridescence. As the sound loops through its 12 minute duration, audio-reactive programming activates the lens apparatus to synchronize light and sound.

Reflection

Reflect on your process of creating the work, it's outcome, and your experience in critique:

- *What did the process of collaboration look like for you?*
- *What worked well, what didn't? Describe why or why not.*
- *Did you achieve your artistic intentions or do you see room for growth? Why do you feel this way? How would you like to grow?*
- *If you were to continue working on this project, what would you change going forward?*
- *Did anything from your critique surprise you, or give you things to think more deeply about? If so, what?*