Full Color Reflective Display
Based on High Contrast Gratings
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Advantages
- Sunlight readability
- Printing-like
- Low power consumption

Challenges
- Brightness
- Gamut
- Contrast Ratio

Reflective Display

Design

Architectures

Ideal Reflection Spectra

2D HCG Color Filter Design

• High Reflectance
• Engineerable Color
• Engineerable Bandwidth

Simulation

Fabrication

Simulation Setup

Gamut

Angle Dependency

On-State

Off-State

Fabrication Flow Chart

Fabrication Recipes Optimization

Measured Reflection Spectra

Filter Photos

Discussion & Future Work

Simulation

Challenges

Advantages

Gamut

Angle Dependency

• Resonance & Interference
• Finite-Difference Time-Domain
• 300 nm – 500 nm
• Angle Sensitivity

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