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Plasmonic Smart Windows: A New Invention from Berkeley's Molecular Foundry

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In the United States, roughly 20% of the annual energy consumption comes from lighting and thermal management within buildings. By adjusting to the surrounding environment, dynamic "smart" window coatings minimize the need for heating and artificial lighting through solar gain optimization. Current dynamic windows can only operate through a visible tint, which reduces natural light during thermal management. This talk will focus on discussing a near infrared plasmonic electrochromic coating developed at Berkeley's Molecular Foundry that dynamically modulate solar heat without affecting visible light. Use of this new class of dynamic coating can improve energy consumption by minimizing artificial lighting during solar gain optimization.