

**BIOPRIMER NO.6:
MODELING A
SYNTHETIC SYSTEM**

SENSOR
Photodiode
T7910M-01-0125

ACTUATOR
820 ohm Resistor
0W182
LED
LED-2

THE TEAM MODIFIED A 2-COMPONENT SIGNALING SYSTEM TO MAKE E. COLI SERVE AS PIXELS IN A PHOTO

Black output

ompC promote: lacZ

FROM NATURE (2005) 438: 441

BACTERIAL PHOTOGRAPHY WAS ONE OF THE VERY FIRST WINNING IGEN PROJECTS

WHEN THESE CELLS ARE GROWN IN THE DARK, THE INDICATOR IN THE MEDIA TURNS DARK SINCE CELL'S LACZ ACTIVITY IS HIGH

THAT'S PRETTY COOL. BUT WHAT IF I WANTED A DIFFERENT COLOR PICTURE...

THAT SOUNDS LIKE A REAL TIME SAVER... CAN YOU SHOW ME HOW THIS CAD TOOL WORKS?

THE SYSTEM CAN BE ABSTRACTED TO A SENSOR AND AN ACTUATOR BUT YOU MIGHT WANT TO MODEL THE GENETIC DEVICES BEFORE YOU BUILD THEM IN THE LAB

YOUR TURN: MODEL THIS SYSTEM YOURSELF

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