MSE RESEARCH AREAS

(

Biomaterials Electronic & Photonic Materials Materials for Energy & Environment Nanomaterials

SPOTLIGHT:

GLOBAL REACH OF BIOMATERIALS



PILL:

MUHAMMAD ZAMAN (BME, MSE) tackled the counterfeit pill crisis by inventing PharmaChk, a device to test medicine purity.

PAKISTAN, 2011
200 people died from
contaminated medicine
NIGERIA, 2007
84 babies died from
contaminated medicine
PANAMA, 2006
Widespread illness from
contaminated medicine



15 Saint Mary's Street, Room 117 Brookline, MA 02446

BU.EDU/MSE

\$115M

FOR KILACHAND CENTER

DIRECTOR OF THE
BIOLOGICAL DESIGN
CENTER (BDC) CHRISTOPHER
CHEN (BME, MSE)
The BDC opened in its new
home, the Rajen Kilachand
Center for Integrated Life
Sciences & Engineering.
Chen's team recently
developed a 3-D blood
vessel-on-a-chip model to
understand what happens to
blood vessels during injury.

\$20M

NSF CELL-MET ERC GRANT

MSE HEAD DAVID BISHOP (ECE, MSE, PHYSICS, BME, ME) See inside cover

\$3M

FOR LIGHT & BRAIN RESEARCH

THOMAS BIFANO (ME, BME, MSE) The NSF grant supports the exploration of brain functions by use of light.

\$2.5M

TO FIGHT DEMENTIA

TYRONE PORTER
(ME, BME, MSE)
The NIH grant supports the development of a localized drug delivery strategy that would reduce age-related blood vessel damage.

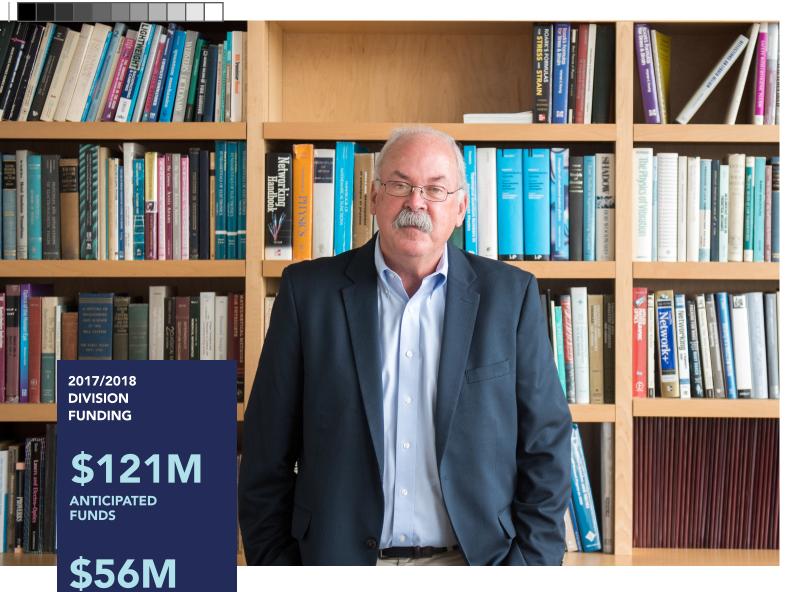
\$1.3M

CENTER FOR SEMICONDUCTOR MODELLING

ENRICO BELLOTTI
(ECE, MSE)
The US Army grant
establishes a center to
develop new simulation and
design methodologies for
semiconductor materials and
devices.



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DAVID BISHOP DIVISION HEAD OF MATERIALS SCIENCE & **ENGINEERING**

\$20M AS ERC DIRECTOR

BISHOP NAMED **DIRECTOR & RECIPIENT** OF \$20M ERC GRANT

A \$20 million grant from NSF established the Engineering Research Center in Cellular Metamaterials (ERC CELL-MET). As director, Bishop will spearhead production of heart tissue to ensure it offers industry and clinical functionality.

INVENTOR

BISHOP NAMED NATIONAL ACADEMY OF INVENTORS FELLOW Bishop holds US patents for 47 micromechanical inventions including the Lambda Router.

FACULTY

CULTY

AFFILIATED ACULTY

ERAGE# ITATIONS

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ELLOWS

MEMBERS

ADEMY

RLY CAREER HIS YEAR

SPECIAL PROGRAMS

INCLUSION PROGRAM

The new NSF ERC and the College established a program to increase the presence of women and underrepresented minorities in the field.

LAUNCH ANNUAL EVENT

The inaugural Materials Science Lecture was sponsored by Schlumberger-Doll Research on the topic of Carbon Based Nanosciences. It featured Dr. Hongjie Dai.

MATERIALS DAY

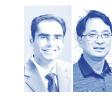
XIN ZHANG (ME, ECE, BME, MSE) hosted the annual symposium, addressing Integrating Metamaterials with Quantum Materials.



MARK GRINSTAFF (BME, CHEM, MSE) developed a nanoparticle system to a patient in one dose.



DOUGLAS HOLMES Letters on how soft matter behaves under unstable conditions.



KAMIL EKINCI (ME, MSE) and CHUANHUA DUAN (ME, MSE) created an antibiotic susceptibility test that measures bacteria movement.



is featured in ASEE's list of 20 high-achieving under 40.

PRESS CLIPPINGS



deliver cancer medicine to



(ME, MSE) published two papers in Physical Review



JAMES BIRD (ME, MSE) researchers and educators **DEGREES** AWARDED MS WITH PRACTICE AWARDED INCE '11 ALL DEGREES AWARDED: AVERAGE GROWTH RATE VER 6 YEARS TUDENT POPULATION: VERAGE GROWTH RATE OVER 4 YEARS **ENERGY DEGREES AT WORK** Alum Rao Mulpuri (MS '92, PhD '96), CEO of View Dynamic Glass, developed a glass that can be controlled through an app & can reduce energy consumption by about 20%. Mulpuri met his business partner Robert Rozbicki, CTO of View, while a teaching assistant at BU.

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COMMITTED FUNDS

\$26M

\$25M

EXPENDITURES

and Theodore Moustakas.

High demand for advanced materials in the 21st century

underscored the need for an interdisciplinary graduate

program at BU. In 2008, the Division of Materials

Science and Engineering was established under the

leadership of Professors Uday Pal, Soumendra Basu,

DOLLARS

RECEIVED

GRANT

MSE HISTORY