Abstract:
Interventional cardiology is a method of treating patients with coronary disease via “intervention” to open blocked or clogged arteries to improve blood flow to and from the heart. An example of an interventional treatment is angioplasty – opening blocked arteries using a tube and a small balloon. However, a common complication of angioplasty is restenosis, a re-narrowing or blockage of an artery at the same site where an angioplasty treatment has taken place. Stenting, brachytherapy, and most recently, placement of drug-eluting stents, have been shown to be effective in reducing restenosis. This talk will give an overview of the materials issues related to reducing restenosis. Examples of coatings research and development issues from a brachytherapy device based on $^{32}$P, will be given, with a focus on how materials engineering can solve complex manufacturing issues.

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