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In Situ Characterization of Optically Transparent Polymer and Dye pH Sensing Films DANIELA TOPASNA, SCOTT COX, TROY EMIG, Virginia Military Institute — We present the results from *in situ* characterization of ionically self-assembled monolayers (ISAM) pH sensing films. These types of films have potential applications in the biomedical field and as optical pH sensors. The films are fabricated by alternate immersion of transparent substrates in aqueous solutions of poly(allylamine hydrochloride) and Direct Yellow 4. The absorption of the film changes when the pH of the surrounding medium changes. We describe the steps in creating the experimental set-up, the fabrication process of the optically transparent films, and the results of the pH dependent absorption measurements.

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