Conventional wisdom suggests that when a firm faces technological uncertainty, it responds by becoming less technologically specialized, so as to remain adaptable to subsequent resolution of this uncertainty. We adopt a competition-based view of technological uncertainty to identify an opposite effect: sometimes the firm may instead become more specialized when faced with greater technological uncertainty, so as to focus on advancing its technologies against competition and influence the resolution of uncertainty in its favor over rivals. We propose that this effect is accentuated when the firm expects it cannot easily adapt to rivals’ technologies subsequently, specifically when rivals are more deterrent through being litigious or innovative. Using a U.S. government funding policy for fuel cell research to create a natural experiment, with stock option implied volatilities to measure expected uncertainty, we find empirical support for our propositions among firms active in R&D for the U.S. communications equipment industry. Through these findings, we demonstrate that a competition-based view of uncertainty identifies an alternate path for the firm’s resource accumulation under uncertainty, and stress that resolution of uncertainty can be something the firm attempts to influence rather than to adapt to.