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## **HMGCC Co-Creation**

**Clarification Questions: Antenna-Boosting Materials**



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## Document Details: Clarification Q&A in response to the call for proposals

Challenge: Antenna Boosting Materials

Deadline for questions: 09/01/2026

#	Question	Answer
1.	<p>In the Context of the challenge section on the HMGCC Co-Creation Security Challenge Form for Antenna-boosting Materials, it states (page 2): "Recent publications have suggested that using novel, solid and uniform materials with frequency dependent dielectric constants could widen the bandwidth of antennas, giving many advantages."</p> <p>Please can you provide the references for these publications, as this is key to understanding the challenge scope.</p>	<p>X. Yang, E. L. Bennett, I. Calisir, Q. Hua, J. Xiao and Y. Huang, "A Study of Wideband Dielectric Resonator Antennas Loaded With Special Dispersive Materials," in IEEE Open Journal of Antennas and Propagation, vol. 5, no. 6, pp. 1658-1670, Dec. 2024, doi: 10.1109/OJAP.2024.3436557.</p> <p>Ilkan Calisir, Xiantao Yang, Elliot L. Bennett, Jianliang Xiao, Yi Huang, "Enhancing the bandwidth of antennas using polymer composites with high dielectric relaxation," Materials Today Electronics, Vol 3, 2023, <a href="https://doi.org/10.1016/j.mtelec.2023.100026">https://doi.org/10.1016/j.mtelec.2023.100026</a>.</p>