

# Molten core fiber fabrication: Opening up the Period Table

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Glass, in the form of optical fibers, enables all means of modern communications and a growing variety of other important industrial and consumer uses. However, the principal methods employed to fabricate optical fibers (i.e., CVD methods) have the unintended consequences of greatly restricting the range of compositions that can be made into practical fibers. This invited talk will discuss the past, present, and future of the molten core method [1-4] for fabricating a wide variety of novel glassy and crystalline core optical fibers, exhibiting an equally wide variety of fascinating properties not previously known.

[1] J. Ballato and E. Snitzer, *Appl. Opt.* **34**, 6848 (1995).

[2] J. Ballato and A. C. Peacock, *APL Photon.* **3**, 120903 (2018).

[3] U. J. Gibson, L. Wei, and J. Ballato, *Nat. Comm.* **12**, 3990 (2021).

[4] T. Zaengle, U. J. Gibson, T. W. Hawkins, C. McMillen, B. Ghimire, A. M. Rao, and J. Ballato, *ACS Photon.* **9**, 1058 (2022).