What is claimed is:

1. A process for preparing terminated fibers comprising:

(a) depositing one or more fibers in a ferrule having a ferrule end face such that a portion of each fiber extends forward beyond said ferrule end face;

(b) after step (a), positioning a register surface in a predetermined position relative to said ferrule end face;

(c) after step (a), depositing an optically- clear filler between said end face and a register surface and around said portion of each fiber; and

(d) once said filler solidifies, releasing said register surface ~~form~~ from said filler to define a mating surface on said filler.

2. The process of claim 1, wherein said register surface used in step (b) is the same register surface used in step (c).

3. The process of claim 1, wherein said register surface used in step (b) is a first register surface and said register surface used is step (c) is a second register surface different from said first register surface.

4. The process of claim 1, wherein step (a) comprises cleaving said portion of each fiber, thereby forming cleaved fiber end faces.

5. The process of claim 4, wherein said cleaving is laser cleaving

6. The process of claim 1, wherein step (b) comprises registering said fiber end faces by moving said register surface backward, thereby pushing said fibers backward until one or more of said fiber end faces abut said register surface and until said register surface is in said predetermined position relative to said ferrule end face.

7. The process of claim 6, wherein said ferrule has at least one first alignment member and said register surface is part of a tool which also comprises a second alignment member, and, in step (b), positioning said register surface comprises interengaging said second alignment member of a tool with said first alignment member such that a register surface of said tool is aligned with said ferrule.

8. The process of claim 1, wherein said ferrule end face is not polished.

9. The process of claim 1, wherein, said optically-clear filler is a UV-curable adhesive.

10. A ferrule assembly comprising:

a ferrule having an end face and a mating face;

one or more fibers a portion of each protruding beyond said ~~mating~~ end face; and optically-transparent filler encapsulating said portion of each fiber and defining a smooth mating face a predetermined distance from said ~~ferrule mating~~ end face.

11. The ferrule assembly of claim ~~1~~810, wherein said one or more fibers are two or more fibers.

12. The ferrule assembly of claim ~~1~~810, wherein said filler is compliant.

13. The ferrule assembly of claim ~~1~~810, wherein said mating face is planar.

14. The ferrule assembly of claim ~~1~~810, wherein said mating face is non-planar.

15. A tool used with the process of any of claims 1 through 9 comprising:

(a) a wall having a register surface, said wall being essentially transparent to a certain light frequency; and

(b) at least one alignment member at a certain angle from the register surface, the alignment member configured to cooperate with a corresponding alignment member of a ferrule.