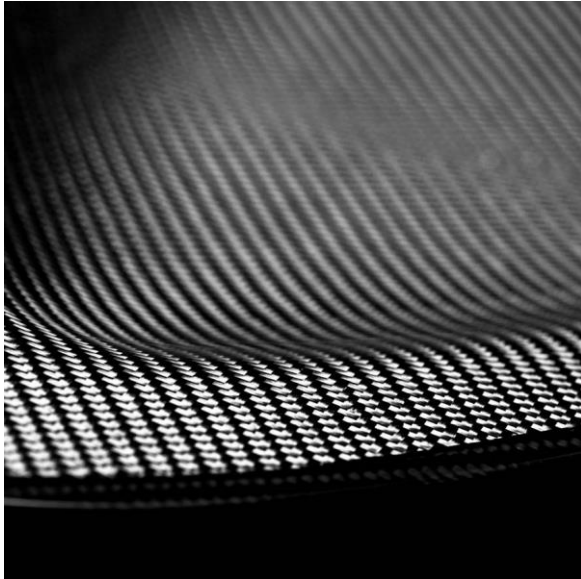
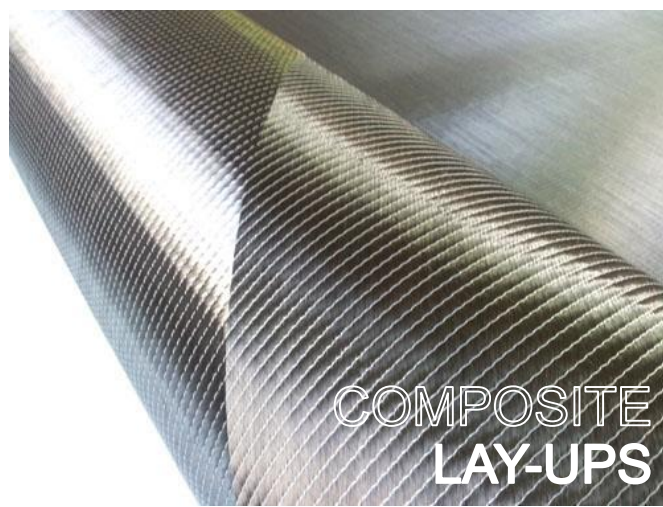


# FOOTWEAR COMPOSITE MATERIALS





LEARN BY MAKING



ATHLETE\*



PERFORMAN



# UPPERS

YARNS

CONSTRUCTIONS

FOAMS

POLYMERS

COMPOSITES

LUNARLON

SOLE-UTIONS

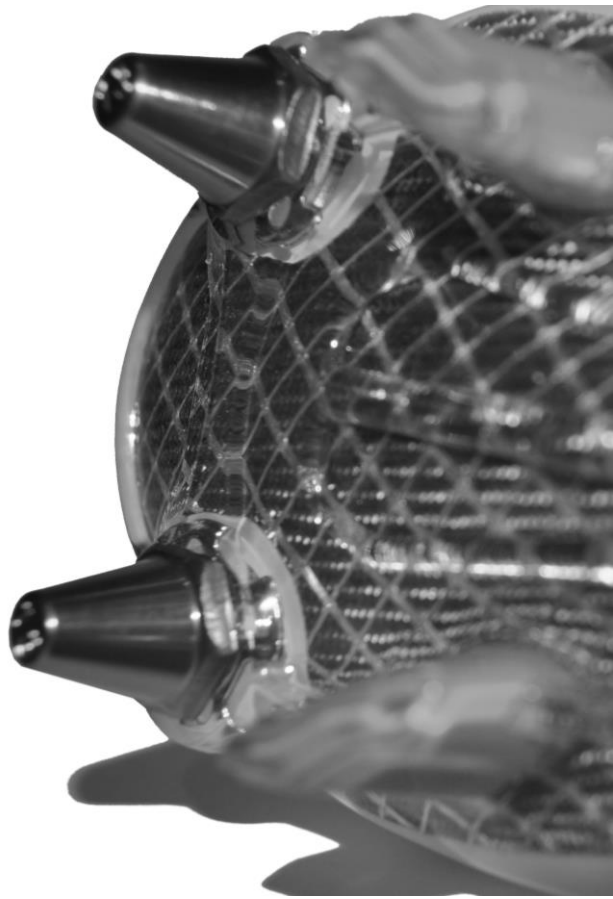
FTW MATERIALS

# COMPOSITE REQUIREMENTS

- LIGHTWEIGHT
- FLEXURAL FATIGUE, F(T)
- ENERGY RETURN
- LONG-TERM DURABILITY
  - PLATE
  - DELAMINATION
- AESTHETIC OPTION(S)
- COMFORT (I.E. STUD PRESSURE)
- RAPID PROTOTYPING

## KPI'S

- SPECIFIC GRAVITY
- GAUGE THICKNESS
- COLD ROSS FLEX
- OVERMOLD ADHESION



COMPOSIT



## VAPOR CARBON UNTOUCHABLE

- MATERIAL: TENCATE BW1000 CARBON & FIBERGLASS BASKET WEAVE.
- CONSUMER BENEFIT: MORE LIGHTWEIGHT, REACTIVE, STRUCTURAL PLATE WITH BETTER ENERGY RETURN
- SAVED OVER 1 OZ IN A SIZE 9 BY DELETING THE FULL LENGTH INNER SOLE BOARD.



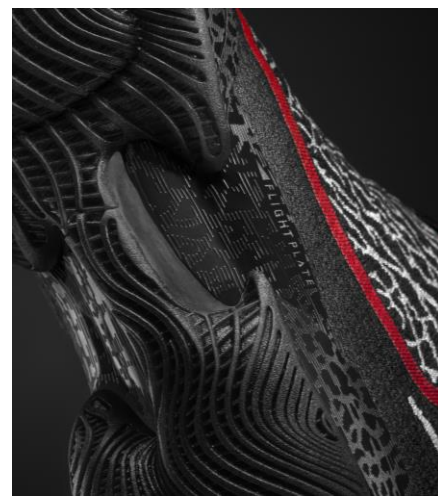
## MERCURIAL SUPERFLY IV SOCCER

- LAUNCHED JUNE 2014
- FLYKNIT UPPER – THREE KNIT WEAVE
- FLYWIRE TOE TO HEEL FOR A ‘SLING SHOT’ EFFECT – FORWARD PROPULSION
- HIGH-TOP DYNAMIC FIT COLLAR – BETTER FIT/SENSATION
- FLEXIBLE FULL-LENGTH CARBON PLATE FOR MORE EFFICIENT POWER TRANSMISSION



GLOBAL FOOTBALL  
PLATE





## AIR JORDON 28

- CF MIDSOLE SHELL
- CF HEEL COUNTERS
- INCREASED ENERGY RETURN
- ENERGY EFFICIENCY & ENDURANCE  
- 'FAST FOR LONGER'

—RUSSELL WESTBROOK

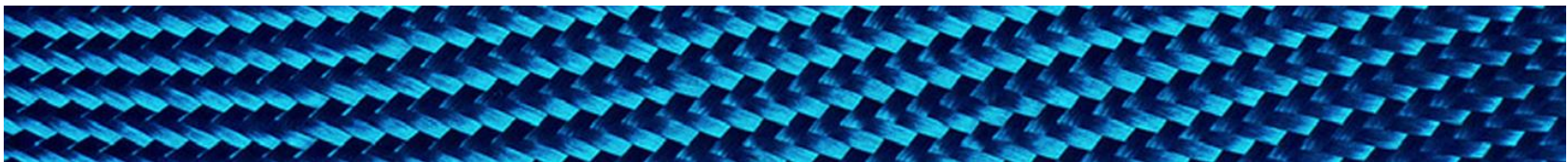
BASKETBALL  
MODERATOR PLATE



## AJ RETRO XII

- AJ XI FIRST CARBON PLATE INCORPORATED IN THE AIR JORDAN OUTSOLE WINDOW MAKING IT LIGHTER & DURABLE
- PLATE FORMULATED FOR AESTHETICS
  - CHEVRON PATTERN SPECIFIC TO XII
  - GLASS & CARBON COMPOSITE WEAVE ALLOWING FOR VARIOUS COLOR COMBINATIONS





## CONCLUSIONS

- THERMOPLASTIC COMPOSITES ARE A SIGNIFICANT GROWTH OPPORTUNITY FOR NIKE FOOTWEAR.
- CLEATED FOOTWEAR COMPOSITE APPLICATIONS REQUIRE HIGH ENERGY RETURN AND FLEXURAL FATIGUE.
- FOOTWEAR INNOVATION OPPORTUNITIES REQUIRE RAPID PROTOTYPING FOR ATHLETE PERFORMANCE INSIGHTS.
- AESTHETIC OPTIONS ARE EXTREMELY IMPORTANT FOR COMPOSITE FOOTWEAR APPLICATIONS.

# FOOTWEAR COMPOSITE MATERIALS

