

crystallite_integrateStress

```
Fg_new = crystallite_subF
Fp_current = crystallite_subFp0
Tstar_v = crystallite_Tstar_v
Lpguess_old = crystallite_Lp
Lpguess = crystallite_Lp
crystallite_integrateStress = .false.
```

```
invFp_current = math_inv3x3(Fp_current)
```

```
invFp_current == 0.0
```

```
.true.
```

```
.false.
```

```
return
```

```
∅
```

```
A = invFp_current ^T * Fg_new ^T * Fg_new * invFp_current
```

```
constitutive_microstructure
```

```
C = math_Mandel66to3333(constitutive_homogenizedC())
```

```
NiterationStress = 0
```

```
leapfrog = 1.0
```

```
maxleap = 1024.0
```

```
LP LOOP (see crystallite_integrateStress_LpLoop)
```

```
invFp_new = invFp_current * B
```

```
invFp_new = invFp_new / math_det3x3(invFp_new)^(1.0/3.0)
```

```
[Fp_new, deterror] = math_invert3x3(invFp_new)
```

```
error
```

```
.true.
```

```
.false.
```

```
INVERSION FAILED: return
```

```
∅
```

```
Fe_new = Fg_new * invFp_new
```

```
Tstar_v = Tstar_v + p_hydro
```

```
crystallite_P = Fe_new * Tstar_v * invFp_new ^T
```

```
crystallite_Lp = Lpguess
```

```
crystallite_Tstar_v = Tstar_v
```

```
crystallite_Fp = Fp_new
```

```
crystallite_Fe = Fe_new
```

```
crystallite_integrateStress = .true.
```