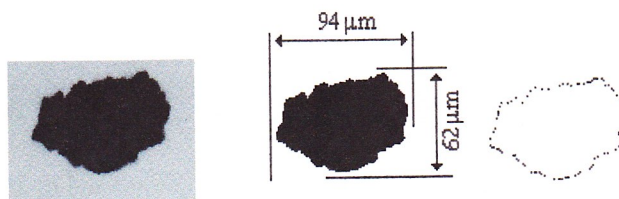# FRACTAL ANALYSIS

FIGURE 1.
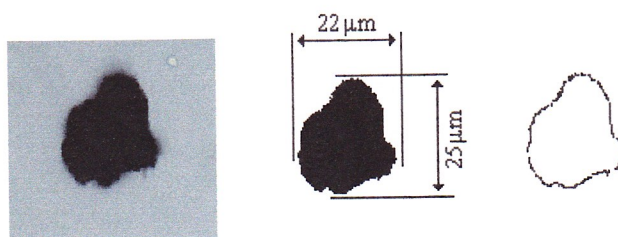Sequence of analog image, <u>thresholded</u> image and perimeter of particle *LS1*.

FIGURE 2.
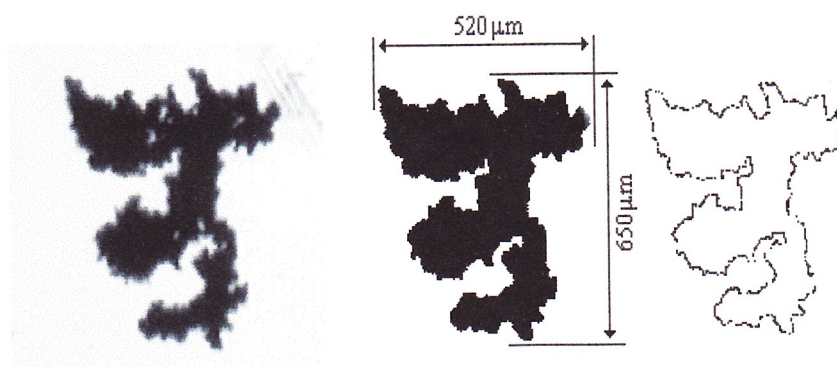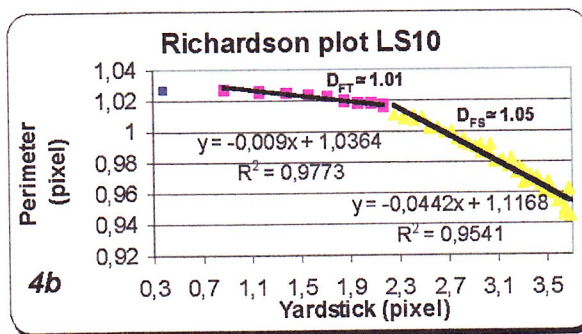Sequence of analog image, thresholded image and perimeter of particle *LS10*.
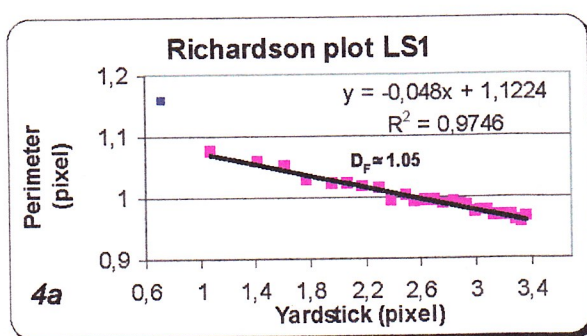

FIGURE 3.
Sequence of analog image, thresholded image and perimeter of an *R* particle (*R35*).

FIGURES 4*a* and *b*.
a) The RICHARDSON plot of particle *LS1*.
b) The RICHARDSON plot of particle *LS10*, which suggests two fractal dimensions.

A FRACTAL DEBRIS CLASSIFIER
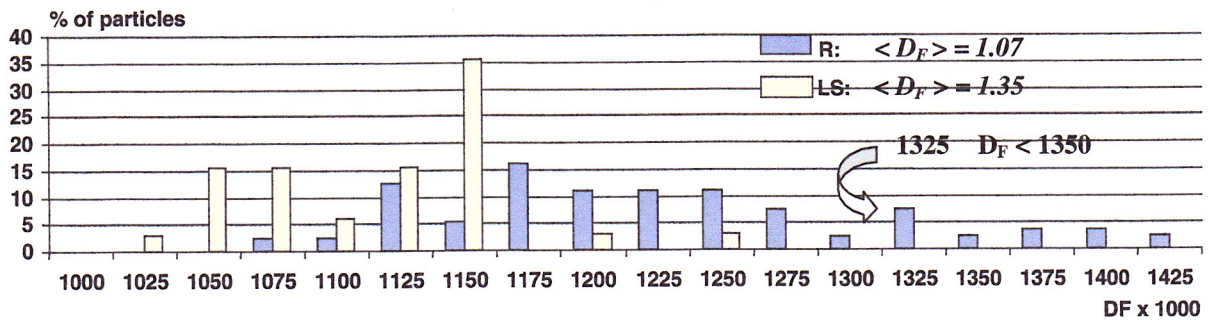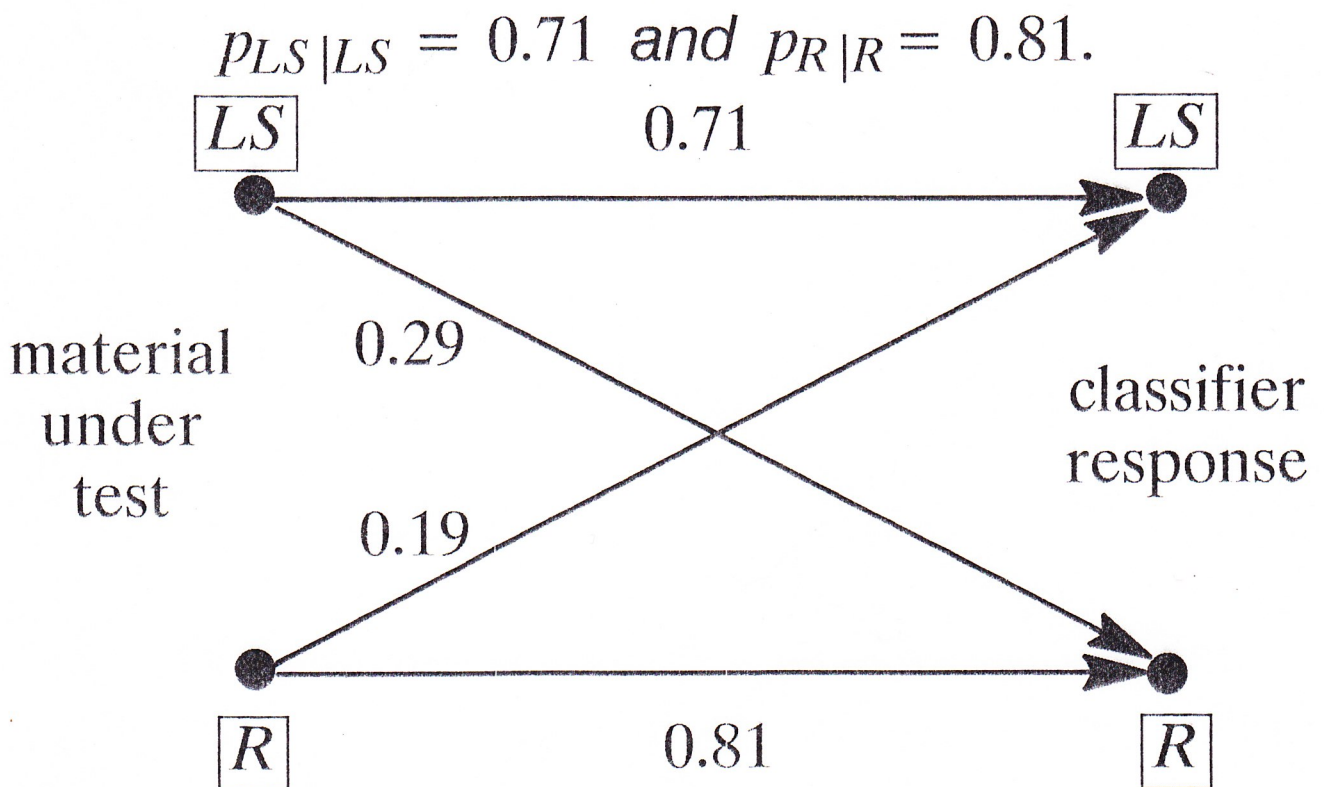
The experimental histogram:

FIGURE 5.
Fractal dimension histograms of materials *LS* and *R*. Average values, $<D_F>$, are included.

The result:

$$p_{LS|LS} = 0.71 \ and \ p_{R|R} = 0.81.$$

(C E SHANNON's noisy, binary transmission channel).