

a major effect on the apparent coefficient. That's why I refuse to believe, until someone demonstrates it, that the diffusion theory will yield the correct absorption coefficient (the one I call the absorbing power) for particulate materials in ToF experiments. I do not question that it may extract a meaningful surrogate for the proper coefficient.<sup>9</sup>

As always, responses to DJDahm@aol.com are welcome.

## Reference notes

1. In reverse order, these are some variant of things said by Wilbur Wright; Bertrand Russell; Max Planck; and my Grandma, Jennie Bandstra.
2. The original "threat" was in D.J. Dahm, "There's no Beer's law for scattering samples!!!!", *NIR news* **15(6)**, 6–7 (2004); and was revisited in D.J. Dahm, "Making Waves", *NIR news* **16(6)**, 15–16 (2005). One of these days I make good on my promise.
3. The first column in the series was D.J. Dahm, "Blowing Up Bridges", *NIR news* **17(2)**, 12 (2006); and the last was D.J. Dahm, "Is the diffusion model adequate for NIR measurements on particulate samples? (final round)", *NIR news* **17(8)**, 5–6 (2006).
4. This is an American country expression meaning "naked truth".
5. D.J. Dahm, "Re-calibrating Kubelka-Munk: which absorption coefficient?", *NIR news* **14(3)**, 10–11 (2003).
6. D.J. Dahm, "What do you mean: "linear"?", *NIR news* **16(5)**, 8 (2005).
7. This is a British expression meaning "nonsense". As I understand it, it comes from drunken sorts trying to remember the words to a familiar song, and only being able to come up with "fall ... derr ... all". This was so common that songwriters just started putting it in as the refrain, thereby eliminating the need for Guinness. Talk about unneeded efficiency.
8. This is a Yiddish expression which refers to a comic theme or gimmick. Here I probably should have used the phrase "take on this", because I really don't want to imply that Dave is in any way "funny".
9. I'd say that that ended the discussion of diffusion theory, but I've told that lie before.

## Obituary: An NIR pioneer is gone . . .

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**D**r Robert Biston passed away on 4 January 2007. Robert was born on 11 November 1936 in Grand-Manil, a small village near Gembloux, Belgium. He was the only child from a modest family; his father died very young from a heart attack and his mother went on keeping a grocery shop. He spent his childhood during the Second World War deprivations and this period surely formed his strong character. Living in Gembloux, he progressed naturally to higher education in the town, namely the State Agronomy University from which he received his Master's degree in 1960 in Chemistry and Food Technology. After a brief period as assistant to his previous professor in organic chemistry, he was employed as a researcher in a food industry research centre which was funded by the state and the private sector. At this institute he specialised in the study of metal can corrosion and food preservation. He stayed there for 16 years accumulating many international contacts, especially in the USA with the Michigan Bean Association. In 1976 he moved to the Agricultural Research Center of Gembloux and later became Director of the "Station de Haute Belgique" in 1987. In 1994 he was placed in charge of the whole research centre of Gembloux which employed almost 500 people (<http://cra.wallonie.be>). Robert managed the centre as a scientist but also as a businessman, but behind the manager, a tender man was hidden; his door was always open to listen to any problem or concern of his staff. After his retirement in 2001, he remained active and was the chairman of an association called "Agrobiopole Wallon", a centre of excellence in the fields of agronomy and biotechnologies in general which aims to serve the development of Walloon (http://www.agrobiopole.org).

When Robert started his work at CRA-W in 1976, he was immediately interested in forage quality and was aware of the first papers published by K.H. Norris and J.S. Shenk. He understood the interest and the potential of NIR for forage analysis and visited Neotec in Silver Spring (MD, USA); as a result, in 1979 the first NIR instrument, a Neotec FQA51, was installed in the laboratory at Libramont. Between 1979 and 2001,

no less than 18 instruments were acquired to develop a wide range of agricultural applications (see box). Besides these applications, CRA-W became a leader in instrument standardisation and networking when, with the help of Dr John S. Shenk, he set up one of the first networks in 1987. Since then, collaborations and services have multiplied and CRA-W's calibrations are running in all continents. We, his staff and successors, had only to follow in the tracks made by Robert to maintain our NIR expertise. Robert was a member of ICNIRS and, in 1990, he organised the 3rd International Conference in Brussels.

After only five years retirement, Robert has left us following a severe disease. He leaves a widow, two children and four grandchildren. On behalf of the NIR community and the International Council of Near Infrared Spectroscopy (ICNIRS), I wish to pass on our sincere condolences to them. We all will miss Robert; he was my boss but we also became friends. I hope that his spirit will follow our future developments in NIR technology and guide us in the continuation of his pioneering work.



### Applications developed at CRA-W

Fertilisers (N, P, K, humic acids) and composts  
Soils (N, C, CEC etc.)  
Seeds and phyto-sanitary protection  
Crop monitoring (N)  
Precision agriculture  
Nutritive value (feed and forages)  
Technology (flour, baking quality etc.)  
Authenticity (orange juice, wine, olive oil, meat, honey etc.)  
Fruits  
Bio-fermentation monitoring (starch→glucose)  
Biofuels  
Biomethanisation