オージェ電子分光関連文献一覧

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A Bibliography on the Auger Electron Spectroscopy

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1. はじめに

固体表面の定性的な元素分析法として現在評価が定ってきたオージェ電子分光法の発端は1925年にさかのぼることができる。特性X線に対応して、元素固有のエネルギーを持った電子が放出されることが発見されてから30年近く経過した1953年の Physical Review 誌に Bell 研究所の Lander が、電子線励起によるオージェ電子を利用すれば固体表面の元素分析ができることを指摘し、現在の形のオージェ電子分光法 (AES) の基礎が確立された。しかしこれに続いて直ちに今日のように盛んに応用されるようになったわけではなく、1967~68年に G. E. 研究所の Harris によってロックインアンプを用いて微分スペクトルを得るという手法が導入されて感度が飛躍的に向上したことがきっかけとなった。その後、次々と論文が出されており、現在総数は 200 を越えるにいたった。しかしながら AES 関係の論文一覧は発表されていないので、著者等の集めたものを整理して提出したい。

2. 文献の種類と整理法

ここに集めた文献は、オージェ効果の基礎に関するもの、AES の応用例、固体表面の電子分光的研究のうち AES と関連の深いもの、固体中での電子の吸収など AES に直接関係のある現象や実験法さらにエネルギーアナライザーなどの実験装置に関連したものである。著者等の目の届く範囲のものは殆ど全部集めたつもりであるが、落ちているものもある。例えばオージェ効果の引金である電子によって起きる内殻のイオン化に関する文献などは未整理のため、ここには含めなかった。

文献の頭につけた記号は Table 1 に示すように、出

Table 1

72	Aa—Ni	
		分析された元素, 化合物名
	a :	応用
	f :	基礎
	i :	装置関係
	r :	関連現象
	s :	解説, 総合報告
		著者の姓のインデックス
		出版年

版年号, 著者の姓の頭文字, 文献の種類, 分析された元素化合物名の意味を持つ。分類は, AES の応用 : a, AES の基礎 : f, 装置関係 : i, AES に関連する現象等 : r, 解説, 総合報告の類 : s のように表わした。なお元素の項で M とあるのは金属の意である。文献配列の順序は年号, 著者名のアルファベット順によった。ここには1972年11月末までに発表された分を収集した。ただし J. Vac. Sci. Tech. 9 (1972) No. 1, 2 の分は入っていない。

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